Gleanings in Bee Culture

"Created to help beekeepers succeed."

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Let's Sell Honey This Christmas

By Clarence Tontz, Elsinore, California

To maintain honey sales, many beekeepers say, we've got to keep it out of the luxury class. From what I can see we do not move enough of it in the luxury channels. I have reference to the gift and quality food trade.

In recent years a tremendous business has been built up in the mail order selling of fancy and quality foods packed in attractive gift boxes. Also large department stores that formerly handled nothing but clothing are finding it profitable to open up a small section of their store to fancy foods with which to tempt the hundreds of customers who daily come in to buy wearing apparel.

In the state of Washington a huge business is carried on each year in the packing and shipping of large choice comice pears direct to customers all over the United States. That is not all. Apples, peaches, plums, dates, nuts, etc., come in for their share of this business that runs into the millions. Here in California fancy fruit packs are shipped East during the Christmas season by the tens of thousands. Some of these packs include a small jar of honey. But that is not enough. We can push up the sales ourselves.

Last year, beginning around the first of December, we noticed that many of the customers who stopped at our honey stand wanted honey for gifts. So we began to emphasize this angle. We put up placards listing a special price by the case, adding that a case of honey would solve a lot of Christmas shopping. A goodly number of cases were sold on this basis. We advertised that we shipped honey, doing the packing free. Many people shudder at the thought of having to pack anything for shipment. This appealed

Professional signs that are simple and easily read at a glance will make you money.

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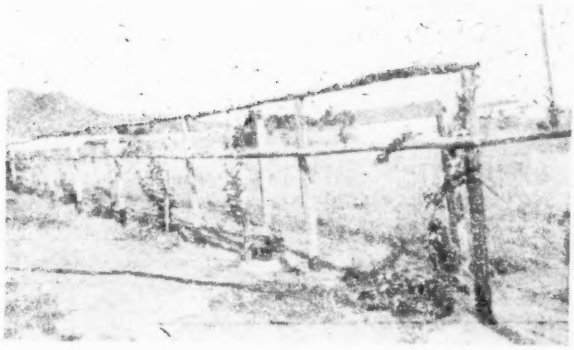
highly to them. Variety appeals to many people. We usually handle four different kinds of honey. Some customers will select four jars of these different honeys and make up a gift pack.

The amount of money spent in the United States each Christmas for gifts staggers the imagination. In addition to being sold on its good taste and quality in plain glass jars and cans, increased honey sales can be made by packing it in decorative containers that may be used as ornaments or for a utilitarian purpose. A berry farm in California ships out many gift packs of jams, jellies, and honey by grouping small jars in a bread basket and wrapping the whole in attractive cellophane. Honey can be packed in jugs, vases, etc.

Some beekeepers and food dealers have become discouraged in shipping honey direct to the customer by parcel post because of the high percentage of leakage. Several years ago when we started shipping honey through the mails we had no end of grief. The five-pound friction top pail is no good for shipping. I have soldered the cover in eight places, packed the can in shredded paper, and still had trouble with leakage. The shoulder of the friction top pail, even when soldered in several places, can be banged a bit, the pail turned upside down, and the honey will seep out through a hairline crack between the cover and the shoulder of the pail. Next we tried five-pound glass jars. At least, we reasoned, there would be no leakage around the screw cap. They were packed extra heavy in shredded paper and the package marked "fragile". Still too many were broken. Next we shopped around and found some oblong metal cans with a screw cap similar to the 60-pound honey cans. We couldn't find any five-pound oblong cans but did find some three-pound and 10-pound sizes. In addition to the screw cap these cans have a metal friction insert which is pushed into the opening before the screw cap is placed on. Although these cans are more expensive than the friction top round pails and the glass jars, they really cost less in the long run in that they do not require so much packing, do not have to be soldered, and cost less to ship.

How about erecting a historical monument on your place giving a brief account of some famous early-day explorer or expedition? Tourists are interested in such items and it probably wouldn't hurt your business either.

You will sell more honey if the public can see a few hives of bees in a setting such as this.



A rustic vine support surrounding your bee yard helps to give your place that rural touch and convinces many customers that the honey bought at your place is better than any bought in town.

They are almost 100 percent leakproof. We use these cans almost exclusively now for shipping honey. A few customers, especially those buying chunk honey, want the honey packed in one or two pound jars. We have very good luck in shipping two-pound glass jars by packing them in a case designed for five-pound jars. This provides plenty of room for packing shredded paper around each jar. The one-pound and 12-ounce jars are packed in cases designed for two-pound jars.

Adding Glamour to Honey

If you operate a stand along the highway you can sell more honey by giving it a little glamour instead of just packing it on the shelves as most grocers do. You can build up fancy displays perhaps with miniature bee hives. Having some real bee hives, empty or with bees, near your stand will be a great help. Even if you don't have a regular stand and sell your honey from your home, a miniature stand just large enough to hold a nice display of your honey will do wonders for your sales.

The honey business is in a mess because we depend too much on the other fellow to move the crop. Many times the beekeeper unloads it on the packer and seldom mentions the word "honey" to anybody except perhaps his wife. The packer loads up the grocer as heavily as he can, not worrying about how much will granulate before it moves off the shelves. The grocer waits at his cash register for you to come through the aisle with your basket. It doesn't matter to him whether that jar of sweetening is honey or corn syrup as long as he makes as much profit on one as the other.

Being in the honey business, there is nothing more pathetic to me than to see a partly-granulated, dust-covered jar of honey on the grocery shelf with a price mark on it that is below the production cost of the beekeeper who produced it. We've got to keep the respect for honey as a nourishing and tasty food high in the minds of the public. This Christmas season, as in every season including the worst depression years, there is going to be a lot of money spent for material things—food and otherwise — for spreading good cheer. Let's get them used to buying honey for Christmas. Once started, a lot of them will buy it all the year.

* * * * *

Siftings

"Despite von Frisch's careful experiments which resulted in a reasonable hypothesis, we have much to learn before we comprehend the instinctive skill displayed. I have released the bees from a hive after its transference from a place some 30 miles distant and seen pollen arriving in quantity within ten minutes, the first burdened bee actually arrived in the seventh minute; doubtless nectar was also coming in. Now this celerity did not depend on any guidance from fellow workers; this time the bees had to start from scratch, as it were, yet success was none the less certain."—A. L. Gregg of the British Beekeepers' Association in his new book "The Philosophy and Practice of Beekeeping".

XUM

To Pack or Not to Pack (in This Locality)

By Jack Deyell, Medina, Ohio

During the fall of 1948 we decided to use two small apiaries of 20 colonies each for experimental purposes in connection with packing bees. We packed ten colonies in each yard and instead of having all of the packed colonies on one side and the unpacked on the other, we alternated packed with unpacked colonies. This appears to be the correct procedure. The object of this experiment was to determine, if possible, whether or not packing bees pays in this locality.

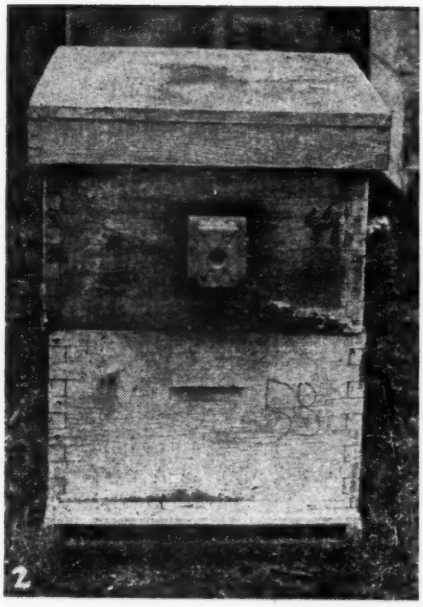
If you will turn to page 687 of the November 1942 Gleanings, you will find pictures quite similar to the ones shown here. The slight differences will be pointed out as we go along.

(1) This shows the boys with some bales of straw on the truck and a roll of black building paper on the ground. They are ready to begin packing. It might be said that we had to wait until a cool day in November to find the bees sufficiently well clustered and the weather cool enough to do the packing satisfactorily.

(2) This shows a double brood chamber hive of bees ready to pack. You will note that the upper brood chamber or food chamber has a projecting tunnel with a ¾-inch hole. This is placed directly over the auger hole in front. The bottom entrance has a small piece tacked to the projecting rails of the bottom board to form a tunnel after packing has been applied.

(3) This shows a cylinder of black building paper, about 8 feet in length, stood up around the hive.

(4) The cylinder of paper has been fastened temporarily around the hive by overlapping the paper about 6 inches and fastening it with a nail until it can be tied up later. A small strip of wood has been tacked to the front, directly above the tunnel, to prevent straw from getting down into the projecting tunnel. Some fine straw has been pushed down on all sides of the hive, especially the corners. We aim to have about 5 inches of straw on the sides and ends and 8 inches on top. Two small pieces of wood have been tacked over the paper to



the projecting middle tunnel.

(5) This simply shows the boys folding the paper down at the top.

(6) A piece of building paper about a yard square is placed on top so as to telescope down on all sides.

(7) This shows paper ready to be folded down.

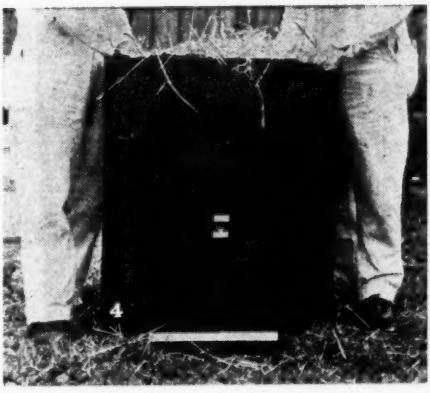
(8) The paper has been folded down and one strand of string has been placed over the top, fastened to a nail in front and a similar nail behind.

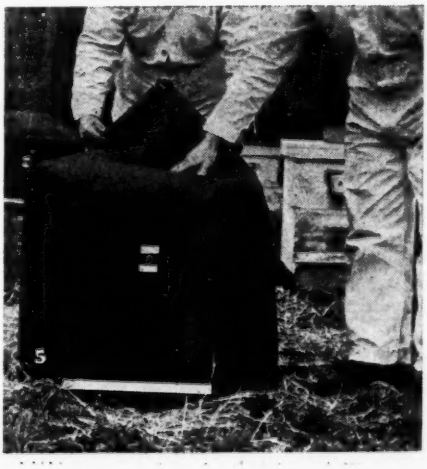
(9) This shows the string running crosswise of the hive and another tied around the paper on top where it telescopes over the other paper.

(10) The last knot being tied.

(11) If you look closely you will see where a piece of paper has been cut out in front directly over the bottom board, to permit the bees to get out and in during weather suitable for flying.

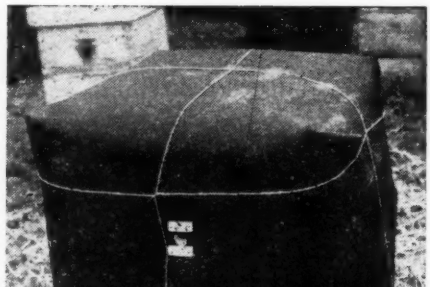
When packing bees is put off until late in the fall, fingers become very cold tying strings. Such tying cannot be done when gloves are worn.

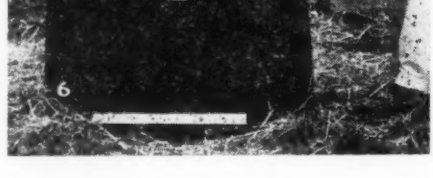


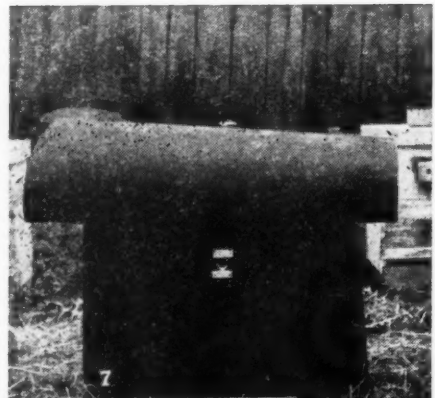


Unpacking in the Spring

Obviously, when hives are packed in the fall they have to be unpacked in the spring. It seems unwise to unpack bees too early because, in our estimation, springtime is a critical time for bees as clusters







of bees need to be kept warm while brood rearing is in progress during early spring. The temperature necessary for brood rearing is somewhere between 91 and 95 degrees F. One wonders at times how colonies of bees in unpacked hives in bleak locations ever manage to keep the brood covered and warm, but they do make a pretty good job of it especially if colonies are very populous, as they should be.

In this locality normal colonies become very populous during late April and early May. It was necessary for us to unpack during the first week in May because bees were beginning to cluster at the entrances of packed hives.

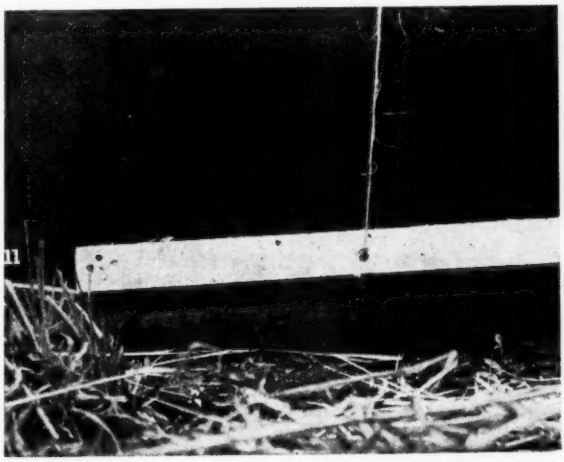
The past winter was quite mild—in fact, too mild to give our experiment a good test.

Packing should be removed late in the evening so that the colonies may settle down during the night and then work out of the hives gradually the following morning. In one of the yards the packing was taken off during a cool day, but in spite of the care we used to avoid getting the bees stirred up unduly, there was a certain amount of drifting from one hive to another. You can well understand that the bees, even when they left the hives the following day, would note the difference in the appearance of the apiary and would naturally become somewhat confused as to where they really belonged. This is one feature about packing that we do not like.

Combs of Brood Counted

In one of the apiaries we checked the 20 colonies carefully on May 5 and counted the number of combs containing brood in each hive, then tabulated results on a record tag available for each colony.

It was found that the average number of combs containing brood in the hives that had been packed was 9¼ while the average number of combs in the unpacked hive was 10⅜. This means that the unpacked colonies had a little over one frame of brood per colony more than the packed colonies.



The hives were not weighed as they were in previous years when similar experiments were conducted. From the appearance of the combs it was apparent that the colonies in unpacked hives had consumed more honey during the winter than the colonies in the packed hives. This was to be expected. According to a number of experiments conducted in previous years, when packed and unpacked colonies were weighed in November and again in April, we found that the unpacked colonies consumed more stores than did packed colonies. However, the unpacked colonies lost between five and six pounds per colony more weight from November 15 to April 15 than did the packed colonies. It was found, however, that the unpacked colonies had more combs of brood than the packed colonies. We conducted this experiment during four winters.

The honey crop has not yet been removed, but from a careful estimate it would appear that there is very little if any difference in the amount of honey produced by the packed and unpacked colonies.

We are now of the opinion that for this locality, at least, packing does not pay. We believe, however, that in some localities where winters are colder, packing may have some value.

XUM

Wax Salvage Plant in California

By H. M. Krebs

Apiary Entomologist, California State Department of Agriculture, Sacramento

There was such a heavy demand for beeswax during the war that a number of our California beekeepers and some inspectors requested that our Agricultural Code be amended so that wax from diseased colonies might be saved instead of being burned. Many readers will immediately say that it would be a mistake to legalize such a procedure. I thought so too at the time and the greater number of our beekeepers opposed the idea.

After considerable discussion it was decided to try out the proposal, but only for the duration of the war. That was the way it was finally drawn up and made a part of the Agricultural Code of California relating to bee inspection.

Two such wax salvage plants were licensed as soon as possible after the law became operative and their operations were watched closely by both the beekeepers and the inspectors. Also, all bees in the vicinity of the plants were inspected regularly, but the thing so many had feared did not happen. There just wasn't any disease being spread from these plants.

The operators knew that both their operation and the whole wax salvage plant idea was really on probation. If they could prove that beeswax from diseased colonies could be saved and the equipment sterilized in their plants, and that no disease was spread to bees in their immediate surroundings during the war emergency, then the wax salvage plant might become a permanent part of the Agricultural Code instead of being a dead issue as soon as the emergency was over. They proved it so well that there were no objections from anyone when it was made a regular part of the Agricultural Code.

Two advantages have accrued to the industry from the wax salvage plants. In the first place, the inspector is relieved of many hours of hard hot work digging holes in hard ground, and charring equipment. This extra time can now be spent for the inspection of bees. The second and most important advantage is the fact that it tends to stop the illegal rendering of wax by the beekeeper when he finds his own disease. In the past a great deal of this had to be done in the open or in a building to which bees have had access. In too many cases more disease has been spread than eliminated. Now, a large part of this disease goes to the licensed plant where the work is done in the manner in which it must be done if the rendering is to be a complete success.

When disease is found in an apiary the owner is given the option of burning or of transporting the diseased colonies to a wax salvage plant. If he elects to take them to a plant, the inspector issues him a permit to move them there. The bees must first be killed and the hives tightly sealed to prevent the entrance of other bees while being moved. The Agricultural Code makes it illegal to remove any honey or wax or to salvage or attempt to salvage any hives or appliances except in a wax salvage plant.

Any person desiring to maintain and operate a plant for the salvage of wax, hives, or appliances from diseased colonies may apply for an annual license to the Agricultural Commissioner of the county in which such plant is located. The commissioner then makes an investigation and if he is satisfied that the plant is constructed in accordance with the provisions of the Code and the required specifications, and that the plant will be operated in accordance with the rules and regulations, he will issue a license. The license is good only for the calendar year and expires on December 31st of the year in which it is issued. A license may be revoked or suspended, or a renewal may be refused, after hearing, whenever it is found that the licensee has not complied with all the required provisions or with the rules and regulations.

The salvage operations must be performed under the direction and supervision of the inspector. This does not mean that the inspector must be present at all times when the plant is in operation. Rather,

the inspector gives complete instructions to the operator and visits the plant at irregular intervals to see that the work is being done properly.

The requirements for the building in which the salvage operations are to be done are strict. Floors must be of smooth-finished concrete, equipped with a drainage outlet screened to exclude trash and sloped to drain readily. A cove of at least two inches in radius is required at the point where the floor and walls meet. The walls and roof may be of any suitable material, but all joints, cracks, or openings except doors, windows, and vents must be sealed with a bee-tight non-porous material. The doors, windows, and vents must be double screened with a wire screen of not less than 16 meshes to the inch, with the screens not less than three inches apart. Entrance to the building must be through a vestibule not less than six feet in length and double screened as above with tight-fitting doors at each end.

Vats used for melting the wax must be so constructed that the water can be kept at the boiling point continuously for the required period and must be equipped with drainage outlets screened to exclude trash. The frames and combs are put in this vat and must be boiled continuously for not less than 30 minutes.

If the frames are to be salvaged they must be boiled not less than 20 minutes in lye water after removal from the vat, and then must be stacked on shelves or racks and not permitted to come in contact with the floor or any contaminated object. The hives, supers, covers, and bottoms must be boiled in lye water for 20 minutes or scorched, as desired.

Honey must NOT be salvaged under any circumstances, but must be drained off with the refuse water. Wax, hives, and appliances cannot be removed from the plant except under permit from the inspector after he is satisfied that the treatment is such that the equipment is completely sterilized.

Floor and vat drains must empty into a settling tank of a capacity not less than that of the vats and then empty by direct connection into a sewage disposal system or cesspool. The drainage connections must be of cast iron or vitreous pipe or other root-tight material and, unless one foot under ground, must be within a bee-tight enclosure. If the drainage is into a cesspool it must be located in a well-drained substratum and must be capped with a watertight dome not less than two feet below the surface of the ground.

All solid matter, other than the wax, remaining after draining the vat must be burned in an incinerator. The incinerator may be of concrete, brick, stone, or steel, equipped with a grate of steel rods not more than one inch apart and not less than a foot above ground level. If the incinerator is within or attached to the plant, all openings must be kept closed when not in use. If the incinerator is detached from the plant, no contaminated material or any material from the plant can be placed in the incinerator except during the actual process of burning and no unburned combustible material is to be left in the incinerator. Unless a forced draft is provided, a clearance of not less than six inches between the ashes and the grate must be maintained.

The owners and operators of these plants take a certain fixed percentage of the wax salvaged as payment for the service rendered. This is usually one certain percentage if only the tops, bottoms, supers, and hives are sterilized, with a higher percentage if the frames are also sterilized. This is done as some beekeepers do not want the frames sterilized and returned. The beekeeper returns and gets his sterilized equipment and the remainder of the wax after the work is finished. He knows that the equipment is safe to be used again and the wax he receives makes him feel that disease has not caused him a complete loss. Of course, all disease is not taken to these plants. The amount of disease found at any one time and the distance to the plant decides whether or not it is economically sound to go to the expense of making the two trips to the plant.

The success or failure of the wax salvage plant operation lies with the operator. It has been proved beyond a doubt in our case that they can be successfully operated. However, a careless operator could very easily bring criticism to the opera-

(Continued on page 723)

XUM

Caucasians—Pro and Con

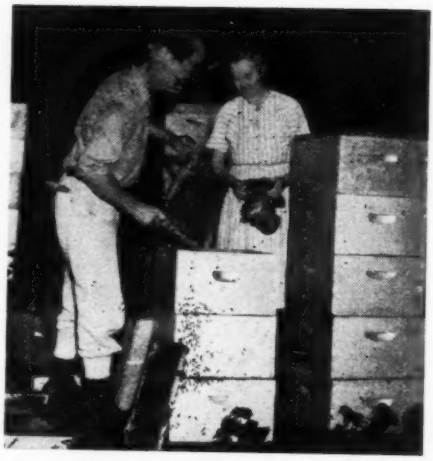
By John and Frances Jessup, Perry, Iowa

[This article was received in July of this year. John Jessup, a former contributor to Gleanings, has been a commercial honey producer for quite a number of years. He was formerly located in Council Bluffs, Iowa.—Ed.]

It's July in Iowa and the honey flow is on! Put a double quota of ice cubes in the water jugs and hurry with the last sandwich in the lunch pails, for already at seven o'clock the sun is bearing down heavily and the air is humid from frequent rains. The corn is growing by inches—the bees are zooming in and out of the apiaries as they run races back and forth to neighboring clover fields—and we must be on the run, too, if we are to keep plenty of supers where they are needed. The boys are on the job setting up equipment, for the drawn combs are all on, and it's a race to have truckloads of foundation supers ready as fast as we can take them out.

The truck is loaded. Do we have everything? Plenty of queen excluders—and don't forget the scythe, for the weeds are on a rampage too. At last we are off! First to the Eason yard. An apiary with adequate winter protection seems to be just as adequately protected from the slightest breath of air in summer. A little later in the day our favorite system of turning the colony on its back off the bottom board, has a tendency to break down at five or six stories, and the results could be disastrous. But these Caucasian bees, hard at work, will take considerable rough treatment in their stride.

This apiary is wintered-over, and there is no question but that Caucasian bees survive better and give greater spring population in our locality than the Italians. Here, too, we have the quick spring build-up which always shows up in our timbered locations due to nectar and pollen from the elms, the maples, the willows, and the haw trees, and which makes this yard ready to do full justice to that sweet clover pasture. The apiaries located on land which is 100 percent cultivated lack these spring sources of pollen and nectar and consequently build up more slowly.



John and Frances Jessup do not need bee veils to handle Caucasians.

It's July in Iowa, and the swarming season is about over—we hope! At any rate, according to the old rhyme, "A swarm of bees in July isn't worth a fly". Nevertheless a practiced glance is cast over the surrounding trees as we drive in. There's nothing like a good honey flow to check the tendency to swarm, and we'll be thankful to concentrate on providing ample storage room. As long as the stock of drawn comb supers held out, we placed them on top and saved the back-breaking lifting in this July heat. Now that they are gone and the foundation must be used, there seems no way to avoid lifting off the top supers in order to place the foundation just above the brood, where the bees accept it more readily.*

Caucasians are Gentle

Before the yard is finished we begin to discard veils, smokers, and even shirts in order to beat the heat as the thermometer soars toward a humid hundred degrees. With Caucasian bees this is quite possible without incurring more than the average number of stings which are part of every day's work in the bee

*[Here in Ohio we have found that during a heavy honey flow populous colonies will work in supers with full sheets of foundation placed on top.—Ed.]

yard. After all is said and done, this gentleness is a characteristic which has kept us using them, more or less, for the last 15 years.

Twice during that time we have resolved to get rid of all Caucasians. The season of 1948 brought the worst siege of swarming in our experience. Almost every good colony wanted to swarm, and in spite of all manipulations they kept right on wanting to swarm through the entire season. Then and there we vowed to eliminate Caucasians because of this swarming tendency. And this in spite of our sure knowledge that winter loss would be greater with Italians. But here we are, in the midst of the 1949 season and we still have many wintered-over colonies of Caucasians. They have inclined to swarm a little more than the Italians but now that the honey flow is going they have given it up 100 percent just as the Italians have.

Noon finds us ready to start on the next yard in this day's run. Under the shade of a friendly tree, we do full justice to our lunch (not forgetting the salt tablets).

Stretched out flat in the blue grass we watch the bees sail in and out of the nearby apiary, with lazy white clouds as a background. After all, this business of being a beekeeper has compensations along with plenty of hard work. The question of the relative merits of Caucasian and Italian bees comes up for discussion as we rest. Which is better? Well, it would be difficult to say that either one is better than the other, for both have strong and weak points.

Caucasians Have a Pronounced Swarming Tendency

From many years' experience we check against the Caucasians a greater swarming tendency under given conditions. So many factors enter into the swarming problem, however, that we believe the Caucasians may be well adapted to certain localities but not so desirable for others. In 1948, when every queenright colony attempted to swarm in our central Iowa apiaries, swarming was practically non-existent in our western Iowa apiaries near Council Bluffs. Why? That is a question we cannot answer but the contention of a beekeeper in a recent article that swarming is **contagious** may have a bearing on the subject. Here is a field that is wide open for the queen breeder to develop a Caucasian strain minus the objectionable swarming tendency.

John is wondering how much longer the flow will last.

Now just where did that queen go? I saw her just a few minutes ago.

A second objection is the impossibility of keeping a pure strain of Caucasians. As soon as supersedure

Part of a well-sheltered apiary in the midst of a honey flow. John is pausing long enough to be "shot".

occurs, the daughter's bees are hybrids showing definite Italian characteristics. Each year in April we introduce enough queens reared by Caucasian breeders to requeen from one- fourth to one-third of our colonies. Still the great majority have bees with yellow coloring on the last few segments of the abdomen, showing the introduction of Italian blood. And these hybrids often have the nasty disposition that makes the beekeeper commit murder in the fall.

Caucasians Propolize Excessively

One of the stock objections often made to Caucasians is that they propolize excessively. This never impressed us as being more than a minor consideration. By using the three-eighths inch bottom board opening the year around, not more than one colony in 50 will propolize at the entrance. The smaller entrance not only eliminates propolis but excludes mice as well. During the summer, ample ventilation is provided by pushing two or three of the supers back far enough to provide a bee space just above the rabbet of the body below, thus giving two or three full entrances across the front of the hive.

On the other hand in favor of the Caucasian bees, as we have mentioned, is their gentleness and their good wintering characteristics. A third point in which they excel is prolific queens. This gives that rapid early build-up—in fact, it may be a factor responsible for their greater inclination to swarm.

The white capping of honey by Caucasian bees makes a beautiful comb, but to the producer of extracted honey that value is more aesthetic than practical. To the comb honey producer who raises white capped comb it might be an important consideration but, unfortunately, Caucasians can hardly be recommended for comb honey production. The swarming tendency is sure to make trouble, as the bees will often swarm rather than draw out foundation, though they might decide to stay at home and go to work if a drawn comb were offered. Another problem for the scientists!

As honey production is our first aim in beekeeping, the most important point in favor of Caucasian bees, to our mind, is their ability to bring in just as large a crop of surplus honey as bees of any other race. There are probably more real differences in the various strains of Italian bees than there are between the Italian and Caucasian races. Changing your race of bees is like changing your apiary locations. Pastures may seem greener and nectar more plentiful elsewhere, but up one year and down another we have found it more satisfactory as far as

(Continued on page 725)

Wear Mittens and Saw Wood—or Sleep Naked

By E. L. Sechrist, Costa Mesa, California

When I was living in the hot tropics I found the natives sleeping naked and slapping at the mosquitoes that were biting them.

As I did not like mosquito bites or the malaria I knew I would be getting afterwards, I improved on the native way by sleeping under a netting.

Some of the natives wore clothes during the day to protect their skin from injury when working. Others wore clothes as a matter of custom, to cover some part of the body; but when no protection of any kind was needed they wore nothing.

Then when I lived in Ohio and sawed wood in the winter-time, I wore mittens, and at night I slept under a featherbed instead of a mosquito netting!

All this is simply the reaction of human beings to differences in temperature.

Do not bees react in a similar way to such differences? Bees are animals, and so are we, physically. In hot climates, or during warm summer days and nights, they do not need to cluster either to save their lives or to rear brood. During the cold winter, however, we find them clustering in order to live, and during cold days in spring they cluster to rear brood. But when there are supers on the hives, if it grows too cold at night to work wax, they simply place a barrier of bees above the brood nest, thus cutting off heat from the supers and maintaining the brood nest warm enough for brood rearing.

These are all well-known facts which we have observed. Beekeepers do not need anybody to tell them these things.

However, beekeepers do need to be reminded that they should use common sense and not jump to conclusions.

The books tell us that in northern winters bees do not attempt to keep the whole hive warm. The general temperature inside the hive may be nearly as low as that outside, but within the cluster the brood rearing temperature of about 93 degrees is maintained.

Bees can control their temperature within limits, just as human beings can.

Suppose that our only protection from winter cold is a big barn and a small 2 x 4 stove. The stove will not heat the whole barn, but it will warm a small spot. Therefore, we draw close to the stove and cluster about it. In the same way the bees gather close around the heat-producing cluster in order to preserve the life of the colony and to protect the brood. The bees in the outer protective layer of the cluster creep inside and save themselves alive, as long as it is not **too** cold. In the event of extreme cold they become numb, stay on the outside of the cluster where they die, and later when it becomes warmer, drop off so that the beekeeper finds them dead on the floor. Or, if the cold continues for a long time, the entire colony dies, and he finds them all dead, packed closely together.

Absolutely the same conditions exist in the human body as in the bee cluster. When we are exposed to too much cold our fingers and toes will chill first, and become numb, but we stay alive. As it becomes colder or the cold continues too long a time, fingers and toes not only become chilled, but they will freeze, and if not warmed before it is too late they will drop off just as the outside bees of the cluster do. We may lose all our fingers and toes, and maybe an arm or a leg, and yet remain alive, just as does the interior of the bee cluster. Then, unless we do something about it, the whole body, or the whole bee cluster will die.

With fingers and toes gone, a human being is seriously handicapped; and so is a bee cluster that has lost much of its working force during a cold winter.

In another respect, humans and bees are different. I slept under a mosquito netting in the hot tropics, not because I needed protection from the cold, but for another reason. I might have slept as the natives did and have had an attack of malaria, seriously impairing my efficiency—or my efficiency might have been impaired because I had lost sleep slapping at mosquitoes. Hence the netting.

But on a cold winter night in the

XUM

North, did I sleep naked under a mosquito net? Hardly! I could do something about the cold, having a **little** reason, at least. I slept under a featherbed, or under enough blankets to keep me warm.

However, because human beings can use their reason in such a situation, we should not jump to the conclusion that bees can do the same thing. Bees can, to a considerable degree, protect themselves from cold weather in winter by clustering closely while the rest of the hive becomes quite cold; and they can also rear some brood and protect it in the early spring without warming the hive to the brood rearing temperature. Nevertheless, what reason has anyone for jumping to the conclusion that bees would not winter **better** if they had exactly the temperature they needed throughout the hive? Or that they would not rear more and better brood if they had precisely the right temperature, and did not have to waste energy to maintain it? Yet that is exactly what we do!

We know that as soon as the weather is summerlike, bees no longer cluster and that all colony activity is speeded up—do we not? As soon as the temperature is correct all through the hive the bees no longer confine their efforts to the space they can keep warm, but they clean up the combs and get everything shipshape for their best work. At the same time, brood rearing expands rapidly as soon as they are free from the necessity of keeping the hive warm.

It is nonsense to argue that, because the bees **can** do this or that in spite of cold and bad condition we should **compel** them to endure what is not conducive to their best activity — unless, of course, it produces more profit for us to let them do the work themselves, if they can, than it does to provide them proper facilities and temperature.

Bees can live and work in most areas in a single-walled, unprotected hive during the winter, even though they suffer and some of them die, but the farther north we go, the more difficult it is for bees to live under such conditions. There is a limit to what they can do unaided, and we need to find out where to draw the line.

Just because bees can live and work in a hive where they must allow part of it to remain too cold for their welfare is no reason for jumping to the conclusion that this is the best way to manage bees.

Not so long ago beekeepers believed, and some of them **knew,** that the size of the hive should be proportioned to the number of bees. We knew that when we had small colonies to winter we could give them smaller hives, as it were, by filling with chaff-packed dummies the part of the brood chamber not occupied by the bees, and then we protected the top, under the cover, with heavy packing. However, there was another important item which we did not recognize, which is that for good wintering in cold climates we need a populous colony of young bees. In Washington, along with Dr. Phillips and the late Mr. Demuth, I did a lot of work on wintering which demonstrated conclusively that the **big** colony **heavily packed** was not compelled to cluster tightly and leave a part of the brood chamber to become cold. On cold winter days I often saw dead bees being pushed out of the hive entrance into the snow, indicating that the bees were not clustered, but were active and doing housecleaning. They occupied every square inch of space in the hive and the whole interior was warm. There could be no cold spots.

However, if we put a half colony into one of those heavily-packed hives—a colony that would fill only half the space—the consequence was that the air inside would become too cold, causing the bees to cluster closely. As a result, when a day came that was warm enough outside for a good flight, the heavily packed hive would not be warmed up soon enough and the weak colony would miss its flight, while the big colony in the same kind of hive would have it already warmed down to the entrance and would be waiting there ready to fly as soon as the outside temperature became warm enough.

At that time we jumped to the conclusion that because we could not winter small colonies in a big hive that was packed only on the outside, the big packed hive was at fault. Was that the right conclusion? I hardly think so.

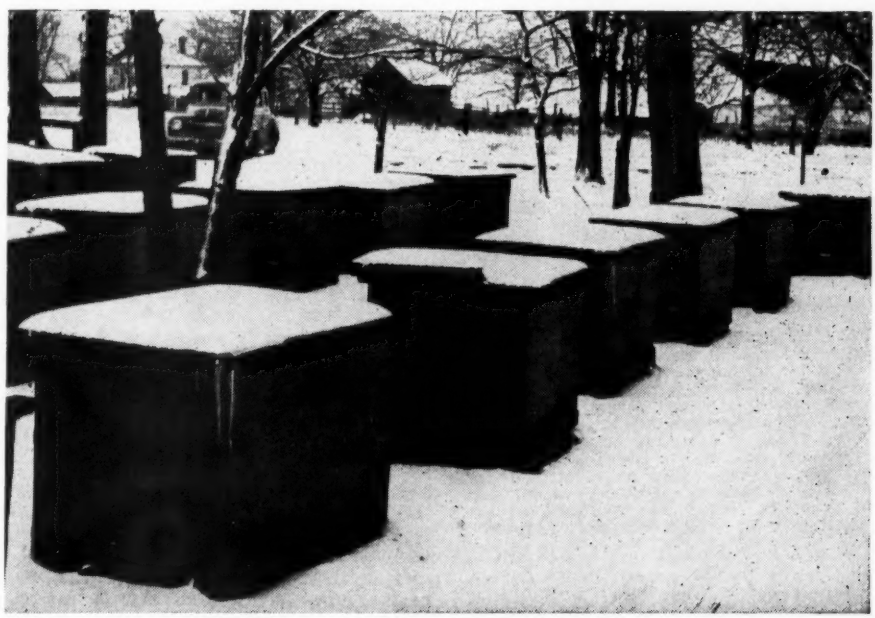
As a consequence of failure with the packed hives when improperly managed, we junked them and went back to the old way because it was easier to have small colonies than good ones. I like the easy way too, but sometimes I can see how prone we are to reach the wrong conclusions and abandon something that has much merit because of some point that was missed.

If we will not have big colonies that can keep their packed and well protected hives warm, we can do something else to keep these baby colonies warm when they should be warm, and that is: provide them with controlled amounts of heat.* This is not only a necessity for getting the best out of our weak colonies, but it is useful for large colonies as well, just in case they are at some time or other not fully able to take care of themselves. With automatic regulation no supplementary heat is used unless needed. Thus no heat is wasted, but it is available as a good crop insurance as well as life insurance.

We should have big colonies whenever we can, but if we cannot have big colonies, what is the use of permitting 20 percent of our colonies to die every winter, wasting good human food, with the inevitable result of a small crop of honey the following season, and a smaller bank account? We must keep on sawing wood. If our weather is not right for bees to build up quickly in spring, let's give them a blanket and a stove to keep them warm—and then see how hard they will work as if in gratitude!

More bees are desperately needed to pollinate alfalfa and other legume crops, to say nothing of fruits, and we ought to be ashamed to lose, on an average, one out of five of our colonies every winter. We must produce more food or more people will die all over the world. Shall we let them die? It is either that, or WE MUST KEEP BEES BETTER.

*[Supplemental heat, especially for colonies below par in strength, would appear to be beneficial in the North. However, the extra cost of supplying this heat would have to be determined to know whether it would be justified in results obtained.—Ed.]



Two double-story hives in each case. Sent by Carl E. Killion of Paris, Illinois.

XUM

Judging the Flavor of Honey

By H. H. Root

Over the years the Pfund grader has been developed for standardizing the color of honey, and the refractometer, expensive as it is, can, in the hands of a trained operator, be used with a fair degree of accuracy to determine the moisture content of honey. The flavor, however, cannot be measured by any standard. Honey is not alone in this respect. One person may like the flavor of a certain food; another, equally honest, may consider it bad. The first cannot tell why he l'ked it, nor can the second tell why he does not like it. If the product is honey and the color is neither extremely light nor dark, differentiation becomes all the more difficult.

A ta~ter should have a good memory. This is true also of a listener. One may remember a mus'cal theme perfectly, but be unable to recall the name of the author or from what selection it is taken. Blenders of tea and coffee often have professional tasters who are so well trained that their judgment can be completely relied upon.

Some food processors select a panel of tasters. From Technical Bulletin No. 284, issued November 1948, entitled "Flavor Evaluation Procedure", by J. C. Henning, published by the New York S'ate Agricultural Experiment Station, Cornell University, Geneva, New York, I quote:

The Panel Method

A flavor panel scoring products should work in a room free from odors or disturbances. The scoring is done "blind"—that is, no member of the panel knows the identity of the samples scored. Likewise, consideration must be given to the proper temperature for examination of a given product, the amount of sample, number of samples which can be examined without taste fatigue, and preferred time of examination. It is very important that the person making flavor tests be able to sit down, that he be at ease, and that he have no outside distractions.

No definite conclusions have been drawn relative to the most desirable temperatures for the organo'eptic examination of products. There is a general feeling that the products should be examined at the temperature at which it is normally served. There are obvious exceptions to this rule, especially where the tests involve foods which are consumed at relatively extreme temperatures. Bengtsson and He'm (2) state that "the optimum temperature for the perception of taste is generally considered to be about 20 degrees C. or somewhat higher; some workers give figures as high as 37 degrees C. When 50 degrees C. is reached, the gustatory nerves cease to function."

It should be pointed out that in these panel makeups people se'ected for reliable judgments should be calibrated by hundreds of examinations that are a matter of formal written record. A judge may be required to have an average deviation of not more than 1 point from the average scores of the group and a standard may be set for his ability to repeat judgments on duplicate samples.

Persons from all walks of life can be se'ected who can satisfactorily detect flavor differences and have good flavor memories. A good flavor memory is as important as the ability to detect flavor differences. However, the ability to pass re'iab'e judgment on flavor differences in a product resulting from different methods of processing and times and temperatures of storage requires considerable experience with that particular product. A beginner can gain experience by working with a group of trained observers. His scores do not need to be counted until he has gained sufficient experience to have them fall in line with those of the rest of the group. In the first method a panel of at least eight trained observers should give statistically sound results. However, if only four judges are available, the same number of judgments can be obtained by scoring each sample twice.

A numerical scale is set up for evaluating the product with a position on the scale which defines the lower limit of acceptability. An increase in quality parallels an increase in numerical value. Many types of scales varying in one or more respects are used in the scoring of products. In the Geneva flavor examinations the score sheet with a scale of 1 to 10, is used. A sample rated excellent is given a score of 10; good falls in the range of 9, 8, 7; fair, 6, 5; poor, 4, 3; and very poor, 2, 1.

It dignifies the whole procedure to be reminded that judging by tasting is known at the organoleptic method. (See page 696.)

The confus'on over flavors in honey may be easily demonstrated by the following experiment, and this makes a good demon~tration for a beekeepers' meeting: Let five or six different flavors of honey be collected and plainly labeled. Let a dozen people test each flavor, using new strips of paper or cardboard each time. Then blindfold the participants and have them, one after another, call out the names of the flavors. The confus'on that may result is laughable but not necessarily humiliating. The experiment shows that after two or three tastes, some persons find the flavors run together until the tasters are utterly at sea. Others can tell a

difference easily enough but cannot remember which flavor is which.

An interesting variation of this demonstration for beekeepers' meetings is to have a sample of honey that has been deliberately heated to 180 or 190 degrees—long enough to acquire a caramel-like flavor. Label this product "burned honey". When the blindfolds are applied and the tasting repeated, it is interesting to see how many will accurately detect the burned sample.

Another variation of which I do not approve, is to put in one jar about 75 percent invert syrup or corn syrup along with 25 percent honey. The inability of some to detect that merely proves that after tasting several flavors one's memory is apt to fail. I recall one particular instance of this kind. I was once asked to pass on a sample of honey and tell what I thought the flavor was. After tasting it I said, "Well, I'm not sure that's honey at all." It so happened that several others had been asked to taste the same sample and they gave varying answers. I was the only one who questioned the genuineness of the so-called honey. It turned out to be corn syrup to which a little honey had been added. Honesty compels me to add that I have been wrong so many times that I consider this one instance more luck than anything else. Corn syrup often has what I call a "brassy" taste, and I detected it that day, or thought I did. Of course, if it were not for the cane syrup added, corn syrup would not have a very sweet taste.

If there is any food more difficult to identify than honey, I do not know what it is, for Nature frequently makes possible natural blends. I have always insisted that I can tell when there is just a little basswood in clover honey. Several years ago, however, when tasting some of Leroy Keets' honey at Watertown, New York, I said I could tell it had some basswood in it. The laugh was on me, for he said basswood did not yield that year—at least, no bees were on it. My sense of taste was influenced by what I thought I knew.

At a banquet in the State of Michigan, on one occasion, I remembered very well the flavor of honey that I was served—that is, the taste was perfectly familiar but my memory was false. I thought it was vetch and the look on Mr. Kelty's face, as he assured me it was milkweed, said as plainly as words, "How could you confuse vetch and milkweed?" I don't know how I did it, but I did.

At a New York meeting a beekeeper asked me if I could identify a sample of honey. Noticing the smoky appearance and the indescribable but never-to-be-forgotten flavor of honeydew, I asked the man if there was considerable oak in the vicinity of his bees and he admitted there was, so I said, cautiously, that the honey might have a little honeydew in it. The beekeeper submitted his sample to Dr. Phillips who immediately said, "Mr. Root is wrong—it is honeydew, but there may be a little honey in it."

I have known two men who could identify, unerringly, between 20 and 30 different flavors of honey. Both the sense of taste and the memory may be trained. Usually, one having a trained sense of taste also has an equally good sense of smell for it is well known that in tasting we depend somewhat upon the olfactory nerves. How little we know about flavors of honey! I have always described alfalfa honey as having a minty flavor. Many others disagree. Who can describe the flavor of vanilla or nutmeg? They taste like vanilla or nutmeg. Likewise, who can describe the exquisite flavors of white clover, orange, sourwood or guajillo honeys? These flavors are God-given and not created by synthetic means. They may be changed or weakened by careless handling, but that is another story.

"Just set the water out for them — you don't have to feed it to 'em with a spoon."

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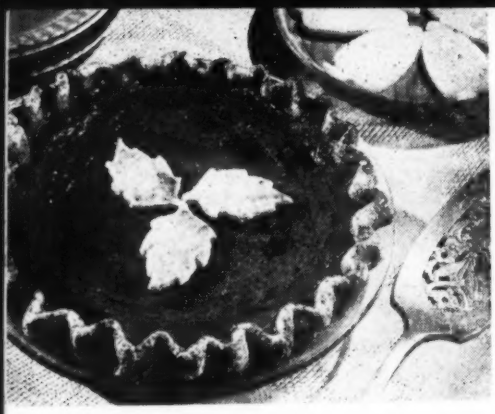


Each One is a Honey

By Mrs. Benj. Nielsen

This is a honey of a pumpkin pie. —Photo courtesy of Kellogg Co.

Leafing through the pages of a magazine recently, I spied a recipe for Honest Apple Pie. Curiosity aroused, I studied the list of ingredients to find out just why that particular pie was called an honest apple pie. For the life of me, I could not decide why this certain pie had been awarded such a designation—and the author did not explain or give a history of her brain child. It sounded like an apple pie—probably a very good one. Could the name have been an eye-catcher to assure attention? It could! Fanciful to insure a reading with a possible tryout. Anyway, lots of these fanciful recipe names are good for a giggle.

Honey, fruits, and spices have a natural affinity, one for the other, and when properly combined they produce a subtle and distinctive flavor that is a delight. Whether you are preparing the honey pumpkin pie for the Thanksgiving dinner or merely for everyday consumption, the leaf crust arrangement is an attractive note in keeping with the fall season. Use a cardboard — or better still, a plastic pattern—which can be used again and again, to trace the leaf design on the dough, and with a few deft strokes of the knife, veins are etched in, adding a most realistic touch.

Honey Pumpkin Pie

One unbaked bran pastry shell, 2 eggs, 1½ cups milk, 1½ cups pumpkin, ½ cup honey, ½ teaspoon salt, 1 teaspoon cinnamon, and ½ teaspoon ginger.

Prepare bran pastry shell. Beat eggs slightly; add remaining ingredients, and mix thoroughly. Pour into bran pastry shell. Bake in moderately hot oven, 425 degrees F., about 45 minutes. Bake leaves separately and arrange over cooked top.

Bran Pastry Shell

Two tablespoons ready-to-eat bran, ¾ cup sifted flour, ¼ teaspoon salt, ¼ cup shortening, and 2 tablespoons water, more or less.

Crush bran into fine crumbs; mix with flour and salt. Cut in shortening. Add water, a little at a time, mixing until dough is just moist enough to hold together. Roll out on lightly floured board to about one-eighth inch thickness. Fit into pie pan; trim edges.

Honey Spareribs

Two pounds spareribs, 2 tablespoons shortening, 2 tablespoons honey, 1 tablespoon cornstarch, ½ teaspoon salt, ¼ cup vinegar, ¼ cup cold water, ½ cup pineapple juice, ¼ cup diced onion, and ⅓ cup green pepper.

Cut spareribs into serving pieces. Simmer in boiling salted water two hours, or until tender. Remove from water, drain well. Brown spareribs in hot shortening. Combine honey, cornstarch, salt, vinegar, water, and pineapple juice. Add to ribs and cook, stirring constantly until sauce is transparent. Add vegetables and cook five minutes or until sauce is almost absorbed.

Honey Spice Cookies

One cup sugar, 1 cup shortening, 1 cup honey, 2 eggs, 4 cups sifted flour, ¼ teaspoon salt, 2 teaspoons soda, 1 teaspoon cinnamon, and ½ teaspoon cloves.

Cream sugar and shortening together; add honey gradually and cream to blend well. Stir in well beaten eggs. Add flour sifted with soda, salt, and spices. Mix well. Roll out to ⅛ inch thickness on lightly floured board. Cut in desired shapes. Place well apart on greased cookie sheets. Bake in moderate oven, 350 degrees F., about 10 to 12 minutes. Dough may be chilled and dropped, returning unused portion to refrigerator.

Siftings

"Prejudice is being down on what you are not up on."—Anonymous.

* * * * *

"The scales of wax are exactly of the same shape as the membranous areas upon which they are found. There are only eight in each individual bee; for the first and the last ring, being of a different shape from the rest, do not have any. The size of the scales decreases with the diameter of the rings upon which they are moulded; the largest are under the third and the smallest under the fifth. We noticed that the scales were not alike in every bee; shape, their thickness, and consistency." — Huber's "Observations of a difference was perceptible in their Bees".

* * * * *

"We have never known a hive too full of honey to winter, for in our locality they always consume enough from the central combs to have plenty of clustering room before very cold weather." — A. I. Root in September 1873 Gleanings.

* * * * *

"Queens reared on Kelley's Island are again advertised in such glowing terms as the 'Italy of America, etc.,' and the prices asked for them are enough to do all they propose honorably, but the gentlemen should be informed that if no queens are reared at all on the Island, as was the case last year, they may expect to have our beekeepers fully informed in the matter."—from July 1874 Gleanings in Bee Culture.

[Please note carefully the date. Those engaged in the present bee breeding project on the Island, as well as others, may be surprised to learn that queen rearing was attempted on Kelley's Island 75 years ago.—Ed.]

* * * * *

"Experiments in Germany to find a substance which will kill Nosema spores without injuring the bees have been unsuccessful. Penicillin, Vitamin B1, and a yeast extract have been used in laboratory experiments. There is evidence to show that penicillin promotes rapid regeneration of the epithelium of the intestine of the bee. Further investigation is necessary."—H. Gontarski, Germany, in October 1949 ABJ.

"I have long contended that success in queen rearing depends largely upon the drones used for mating. The same care should be taken in the selection of the "drone mother" as with the queen mother. The characteristics of the drone bee are more likely to be transmitted to the offspring than those of the queens. Hence, the queen, whose drones are to be used in the propagation of any race, should be as perfect in all respects as the one used for a "queen mother". The drones should be large, handsome, and very active. I never permit drones from my colonies to fly promiscuously, or have any haphazard mating of queens. Only select drones having the above-mentioned qualities are tolerated in my fertilizing apiaries." —Henry Alley in his book "The Beekeepers' Handy Book" (1885).

[No wonder Alley made a name for himself as a queen breeder.—Ed.]

* * * * *

"I feel more certain all the time that winter losses could be greatly curtailed if beekeepers stopped putting such blind faith in heavy winter packing and gave more attention not to HOW they packed but to WHAT they packed."—Jas. I. Hambleton, Senior Apiculturist of U.S. A., Beltsville, Maryland.

* * * * *

"We had a record season last year in honey production. My hives averaged 370 pounds of first grade honey and I believe this was fairly general. Winter is very close to us here although we rarely have snow. Hives are left in the open and never packed."—A. F. Salan, N.S.W., Australia, from letter dated May 22, 1949.

* * * * *

In Reverse

"One hundred years ago today the wilderness was here. The man with powder in his gun went out to hunt the deer. But now the situation's changed and on another plan. The dear with powder on her nose goes out to hunt the man."—from Canadian Beekeeper for January, 1931.

XUM

Second Glances

By C. M. Isaacson

The scattered apiaries of hobbyist beekeepers can produce more effective pollination service than perhaps more colonies in the hands of one commercial beekeeper who must of necessity concentrate in areas where the major nectar-producing plants are plentiful. And the aggregate of honey produced by these same "small beekeepers" is no small item, even though often unrecorded in statistics. We need many more of them (page 609).

Quite a number of bees can be cared for with a car and trailer outfit (page 611). It is especially important now with low honey prices not to add too much either in the way of equipment or operating expense. The advice given in this article to build a trailer box according to the measurements of your particular hives is very good—as is that of having the tires the same size as on your car.

That individual honey bees work over small areas leads to the conclusion that for efficient cross pollination in orchards different varieties of trees need to be alternated rather regularly rather than a pollinator tree every so many trees as often practiced now (page 612). Sardar Singh reports on a careful experiment that may be of far more value than a casual reading might indicate. It also backs up some other conclusions that bees for pollination need to be spread out more widely than has been customary hitherto.

The Hodgson honey house equipment is all designed for efficient and rapid handling of honey in large quantities (page 614). The extractor, uncapping machine, and strainer are all somewhat novel in design but have stood the real test of time in actual practice. That is conclusive.

A honey breakfast is the one Mrs. Nielsen outlines in the first paragraphs of her page this month. And if you have never eaten the honey-sweetened grapefruit she mentions, you have really missed a treat. Try this, and the sugar bowl will have a long rest (page 619).

High yields are one of the best methods of cutting the cost of producing honey, which now is sometimes greater than the price received. Better beekeeping practices are needed more urgently than ever—no longer can the set-out-a-yard-and-leave-it beekeepers stay in business. And at the present price of honey, the practice of not wintering would seem to be an uneconomical one. Winter the best at least, and buy packages to keep up your desired total. A cost of 12 cents per pound for production is frightening when put up against offered prices of seven and eight cents (page 620).

Saltpeter-treated sacking is an excellent starting fuel for the bee smoker, and planer shavings are long lasting with this starter to really get them burning rightly. It is a hint worth a second glance (page 621).

The native bees of the Amazon Valley bear little resemblance to the various types of Mellifica we have developed in Europe and here. Their method of honey storing somewhat resembles that of our bumblebee, while the method of sealing the provisioned cell after an egg is placed on the food is similar to some of the solitary bees native to North America. It is no wonder that some beekeepers are attempting to introduce real honey bees despite the fierce enemies such as ants, other bees, etc. (page 622.)

Elimination of moisture is one of the essentials of wintering—in fact, with this provided for and a real sufficiency of stores—**both** honey and pollen—a strong colony will survive almost any extreme of cold or storm. But no auger holes are needed, or even any special equipment on top of the colony. Use a single strip top entrance—take the strip out and open the lower entrance for summer—or a middle entrance with provision for moisture to escape into the packing (yes, I mean just that). With a tar-paper wrap the sun dries out the pack well and the colony itself is dry. We have tested this here under real winter cold. It does work (page 624).

Price support for honey seems to be on the way—if not now, perhaps the next session of Congress. If

(Continued on page 697)

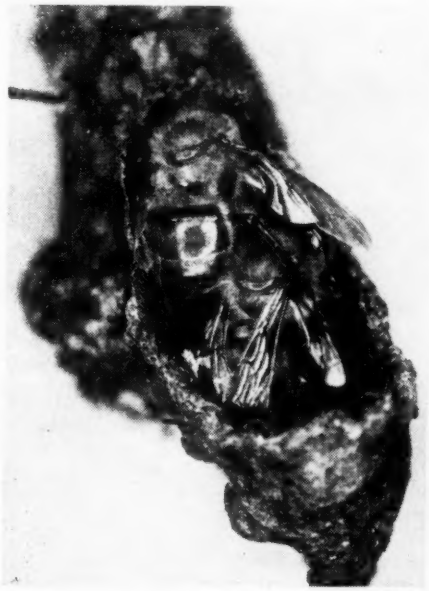
From the Field of Experience

Twin Queen Bees

By Geo. W. Copeland, Pottstown, Pennsylvania

In June I cut the queen cells out of the seven colonies I have and dropped the cells in a pan, then looked them over a little later when I put a screen over the pan to see if any queens would hatch out in a day or so. There were about six or seven cells in all and two of them produced beautiful queens. Several days later I opened the rest of the cells. In one of these cells I found two queens — twins. They were side by side as the photograph shows. They were not too big but seemed to be normal although dead. They lay around the house about a week or more before I thought of having a picture taken so they were pretty well dried and shrunken, but the picture turned out much better than I expected it would. They were a nice reddish-brown when I first opened the cell and reached to the bottom of the cell.

[How many of our readers have seen twin queens?—Ed.]



Package Bees Make Good

By Robert J. Collins, Sunbury, Pennsylvania

I ordered 15 three-pound packages and queens for delivery about April 15 and 15 two-pound booster packages for delivery 28 days later.

On the 18th of April I received the 15 three-pound packages and installed them in 10-frame hives with full sheets of foundation. I kept them fed until I had received the 15 two-pound packages on the 13th of May, 28 days later.

I numbered the hives from 1 to 15. There was no supersedure at all except in No. 14 where laying workers developed after the booster package was added. This booster package may have killed the queen.

When I discovered the laying worker comb in No. 14, I removed the hive and replaced it with another with 10 frames of foundation. I then smoked the bees vigorously from their new stand, and all being old bees they would return to their original stand. When I had smoked practically all of the bees out and was unable to recognize the laying workers, I then placed this hive body on top of an overwintered colony and in less than a minute the laying workers were cleaned out. Then I gave No. 14 a frame of brood from No. 15 and they raised a new queen and went to work. Right now they have two ten-frame hive bodies filled with brood and honey ready for winter.

Twelve of the 15 package bee colonies have filled three 10-frame hive bodies with brood and honey. Two of the 15 have completed their fourth hive body. All were from foundation and no drawn combs were available. I fed these packages 172 pounds of sugar. In this area we had practically eight weeks of drouth from May 23 to July 28, and considering this dry weather I believe these packages did very well.

A fact which I did not know at the time I started feeding was that the colonies which took the sugar syrup the fastest were the ones which produced brood the fastest and evidently had the best queens.

Right now the buckwheat is about over (September 22) and the bees are working goldenrod and wild aster, and some surplus will be obtained providing we do not get an early frost.

My intentions are to overwinter my bees in double hive bodies with both upper and lower entrances and no winter packing.

This above information may be of interest to some of the readers of Gleanings by showing what can be done with package bees even with adverse conditions such as no drawn combs available and almost eight weeks of hot dry weather.

These bees were all received by express in good live condition and full weight. I wrote to the shipper and told him how pleased I was as there were very few drones and mostly young bees in such lively condition. He wrote back and told me that they were very busy at shipping time and these packages were all run-of-the-mill packages as he did not have time to give my packages personal attention which he would liked to have done.

Stopping a Swarm with a Mirror

By Matt Slack, Amherst, Ohio

Stopping a swarm of bees in flight is a much-talked of question without any answer to back it up. While out plowing for corn I saw a swarm of bees passing in front of me. I tried to stop them by throwing dirt in the air but this had no effect so I followed them about a quarter of a mile to the road. I saw a lady standing in her yard and asked her for a mirror.

After explaining to her that I hadn't escaped from an institution she got the mirror which I used to flash the sunlight through the swarm. Almost instantly the bees reversed their direction of flight about 50 feet and clustered on a small shrub. I returned the mirror to the lady and we had a big laugh over the nut who came running out of the field asking for a mirror. I also had a nice swarm of bees.

I think the sun's reflection from the mirror passing back and forth through the swarm caused a condition similar to an electrical storm. This caused the bees to cluster in the nearest place. I have not had a chance to try this again.

A Report from Scotland

By Robert N. H. Skilling

Editor of The Scottish Beekeeper, Kilmarnock, Ayrshire

British weather is notoriously fickle—indeed, a Frenchman once exclaimed to some British friends, "You have no climate here, only weather!" No one knows this better than the beeman, as honey production with an annual rainfall like ours works down to a fine art. For the past ten years or so we have had a series of bad honey years, with very little reward for bees or beekeeper.

This year of 1949, however, has brought about a change of fortune. An exceedingly mild winter brought stocks in most districts through to the spring in good heart. A wet spring somewhat retarded the build-up of colony strength, and our meager sugar ration does not permit of feeding as liberally as the beekeeper might wish. June, however, changed the whole position. A glorious spell of weather from the middle of the month until the end of July coincided with the clover flow and brought the lime tree into blossom weeks in advance of normal blossom time. Stocks simply leapt forward, brood nests expanded almost beyond belief, and supers filled as if by magic. When the weather broke at the beginning of August the hives were teeming with workers and piled high with supers. Our own best hive yielded 232 pounds of honey which, judged by our nor-

mal standards, is something of an achievement.

Ling heather comes into bloom early in August and this year there was only time enough to take off full supers, extract, and replace them. Then off to the heather hills! After a week of refreshing rain, the sun shone again and stocks already at their peak simply piled into the heather. Now we are busy removing this second crop of rich, amber ling honey. Ling honey is too thick to extract and we must either sell it in the comb or crush it in a honey press.

Beekeepers are as happy as sandboys, rejoicing over the first really good crop in years, and home-produced honey is selling freely at 3/6d per pound—something like 50 cents according to the new currency ratio.

Dr. C. E. Burnside Dies

It is with deep regret that we announce the sudden and untimely death of Dr. Carlton E. Burnside. Several weeks ago Dr. Burnside suffered a slight heart attack which culminated in his death October 12, 1949, at Laramie, Wyoming.

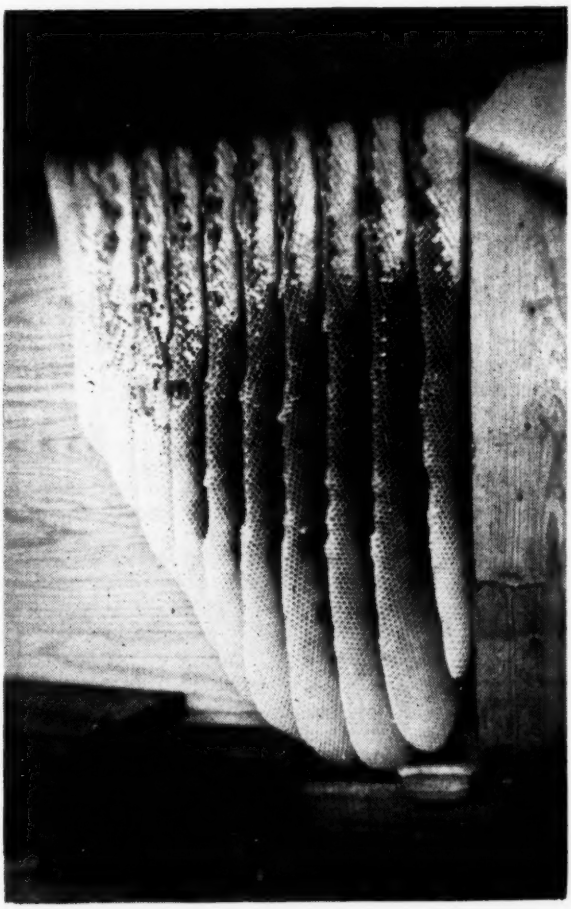
Dr. Burnside, who was well known throughout the world of beekeeping, has been a member of the staff of the Division of Bee Culture, USDA, since 1924. He is particularly well known because of his contributions in the field of bee diseases.

Dr. Burnside was born June 27, 1897, in Branch County, Michigan. He is survived by his wife and three children—two daughters and a son. — Jas. I. Hambleton, Division of Bee Culture.

A Nice Job of Comb Building

By Walter Dunkle
Beaufort, North Carolina

It took the eight weeks of July and August to capture the bees which built this comb beneath the weatherboarding of a building. The cone method was employed, after which the outside weatherboarding was removed. The dark spots at the tops of the combs were filled solid with honey, while the lighter parts at the bottoms were empty because of the stoppage of work. The jagged surface is where the comb was secured to the weatherboarding and ripped loose on removal. The queen was very easily captured unharmed. She is doing a swell job in a modern hive.



XUM

Sales Tales

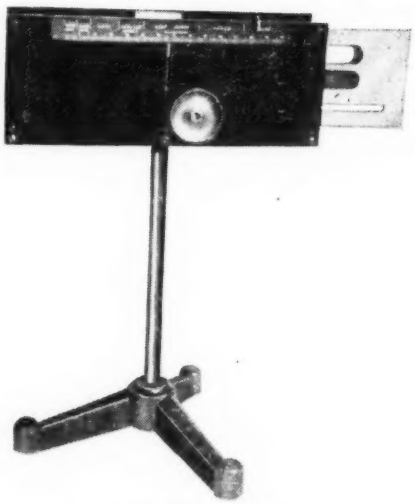
By T. J. Paisley

Standardizing Honey

All honey is not alike. There are many variables in nature which influence the color and flavor of the honey crop. One of the serious problems confronting the beekeeper in the field of marketing honey is the standardization of the product. In order to establish and maintain consumer acceptance for any product it is necessary to insure standard quality. Buyers expect repeat purchases of merchandise to possess the same characteristics as previous purchases. How can we best handle this problem in regard to honey?

Before discussing several methods for the standardizing of your honey crop in relation to the market, let's look at the methods for grading honey. It is necessary to have a grading standard by which to carry on any talk of honey quality. It can readily be seen that any one buying honey should know the source, color, body or density, and the flavor of the product he is purchasing. Unless there is some accurate method of grading or testing honey there would be no basis on which buyer and seller could discuss the honey and price for which it should be bought or sold. One essential of good grading standards is that they be understandable and universal in use. If the West Coast honey producers use a different method for grading their honey than we do here in the eastern section of the country, any inter-shipment of honey will lead to great confusion and possible lawsuits.

Several attempts have been made to establish a sound basis on which to judge the quality of any honey. However, James I. Hambleton, head of the Bee Culture Laboratory in Washington, D. C., and H. J. Clay of the Marketing Division are greatly responsible for our present grading standard. In Circular 24 published by the United States Department of Agriculture which is entitled "Grade and Color Standards", they set forth a sound basis on which to attack the problem of honey standardizing. Their work was revised and superseded by another



Pfund Honey Grader

set of rules which became effective on March 15, 1943.

United States Standards for Grades of Extracted Honey effective March 15, 1943. Extracted honey is honey that has been separated from the crushed or uncrushed comb by centrifugal force, gravity, straining, or other means. (a) Liquid; (b) Crystallized.

Colors of Extracted Honey. Federal inspection certificates will indicate the color of honey as determined by the Pfund Color Scale instrument upon examination. The Pfund scale breaks honey down into the following classifications:

Water-white, extra-white, white, extra light amber, light amber, amber, and dark.

The Pfund color scale has been the most effective method to date for grading or scoring honey as to color. The active principle of this grader consists of an elongated wedge-shaped trough made of glass to receive a sample of the honey to be graded. This in turn is to be compared with an inversely placed wedge of amber glass. As this glass varies in thickness from one end to the other, the degree or density of amber color will vary according to the thickness. At the thick end the

color will be the darkest amber and at the other end—the thinnest—the shade will be almost water-white with a slight suggestion of yellow. In between these there will be all shades of amber, depending on the point on the wedge-shaped glass at which the comparison is made. To find the exact shade of the honey, the two wedges—one of glass and the other of honey—are viewed simultaneously through a vertical slot or window with the background of blue sky. By means of a rack and pinion operated by the knob beneath, the wedges of honey and glass are moved back and forth. When two colors or shades exactly match, a reading in millimeters is taken.

Grades of Extracted Honey. Aside from the color grading which is very important in marketing, the government has set up three grades for extracted honey: U. S. Grade A or U. S. Fancy, U. S. Grade B, and off-grade. I believe it would be of value to discuss the necessary characteristics of U. S. Grade A.

U. S. Grade A or U. S. Fancy extracted honey may be honey of any color, shall be clean, and shall be free from damage caused by turbidity, overheating, fermentation, honeydew, objectionable flavor or odor, or other means. The honey shall be well ripened and shall weigh not less than 11 pounds twelve ounces per gallon of 231 cubic inches at 20 degrees C. or 68 degrees F.

While the technical methods for grading honey color and specific gravity may seem complicated, it is advisable for beekeepers to know just how their product and their competitors' product will line up on some basic standard.

How to Standardize Your Own Honey Sales

It is rare that a beekeeper is in such an area that he will receive only one type and grade of honey such as clover or buckwheat. Thus, in extracting honey one must either extract the light and dark separately or produce a blend of the entire season's yield. It is advisable whenever possible to keep the light honey separate from the dark. In many areas there is a marked preference for extra light honey. In order to get the top price in these areas the light honey must be sold separately. The darker honey can often be disposed of to bakers or for commercial purposes. However, color alone should not be the sole basis of grading for in some areas, particularly the southeastern states, many fine-flavored honeys grade amber in color yet bring premium prices.

Large packers make great effort to standardize the color and moisture content of their honey so that their brand will represent honey of high enough quality to encourage repeat sales. The quality of the honey packed by the small local beekeeper must also be competitive in quality in order to interest the buyer.

Taste is one factor which cannot be scored or graded. People have differences and preferences in the buying of almost all food items. Any beekeeper who markets honey which is of inferior quality tastewise not only hurts himself but the honey industry as a whole. We are still feeling the effects of having millions of pounds of inferior honey flooded into our markets by the war-time sugar shortage. This taste factor must not be overlooked in packing your honey.

Quality is a sales feature that we have neglected for too long. All beekeepers will profit if honey is brought out of the "buyer beware" classification and is sold on the basis of honest grades and standards.

[See "Judging the Flavor of Honey" on page 688.—Ed.]

SECOND GLANCES

(Continued from page 692)

beekeepers can profit by the lesson of the past several years, this support will be justified—if not, no amount of subsidy will really make a sound industry. Let's build a market again — and keep it. The consumer has a right to expect fair treatment (page 640).

Efficiently operated cooperatives can do much for the beekeeping industry, but inefficient ones can harm it equally. Cooperatives are no magic formula permitting disregard of inescapable rules of economics, but in some ways must pay even closer attention to them than a private firm. They can also serve a valuable end by being a medium for exchange of information—education, if you will, between producer and consumer (page 650).

XUM

Asked and Answered

Painting Inside of Hives

Question:—Should hives be painted inside? I have painted some of mine but a friend says it makes the wood too cold for the bees' feet?—Delano Weeden, N. Y.

Answer: — It is unnecessary to paint the inside of hives. The bees apply a thin coating of wax and propolis which is better than paint for the inside. It is customary to paint the outside of hives, although a few beekeepers do not believe in painting. We believe that paint protects the hives from the weather.

Manipulating Brood Chamber for Comb Honey

Question: In preparing a colony for section honey are combs of open larvae better than sealed brood?—Otto Scholze, Wis.

Answer: In our opinion, combs of sealed brood put into a single-story brood chamber, with adhering bees, at the beginning of the main flow are better for the production of section comb honey than combs of unsealed brood because in a relatively short time the sealed brood will have emerged in order to make room for the queen to lay. There are, of course, different ways of manipulating colonies for section comb honey production during the flow. This past season we tried double brood chambers for comb honey. Some of the largest yields were from these two-story deep brood chamber colonies.

Feeding Extracted Honey to Bees for Winter

Question: I have about 100 pounds of last year's honey. Some is candied and some is strong. How can I feed this honey to my weak colonies? I have no disease.—Virgil Ferree, Ill.

Answer: Regarding the granulated honey you wish to feed to your bees, if you will liquefy this honey by heating it, then mix it with water in the proportion of 75 percent honey and 25 percent water, you can then feed it to your bees by using a bee feeder or if you do not have a feeder, place the mixture in a friction-top five or ten-pound pail with the cover perforated with about a dozen small holes made with a 3d nail. The pail of honey and water should be turned upside down on top of the hole in the inner cover made by removing the center block. An empty hive should be placed on the inner cover to shelter the pail while the bees are taking the feed. Of course, the outer cover should be placed on top. It would be well to feed this mixture late in the evening to avoid getting your bees stirred up too much. You should feed in the near future before cool weather comes. The bees will take the food at present (September 23).

Finding the Queen

Question: How can one find the queen in a hive? I have kept bees for over a year and I still cannot find her royal highness.—William Talbot, Mass.

Answer: There is no royal road to finding a queen in a hive of bees. The hive should be examined carefully during the middle of the day when bees are working well and when a large percentage of the bees are in the fields. A moderate amount of smoke should be blown over the tops of the frames. The outside frame should be removed and examined carefully on both sides, then stood upon end, leaning it against the front corner of the hive. The remaining combs should each be examined carefully, using as little smoke as possible. If the bees do not get stirred up too much it is a comparatively easy matter to find the queen. However, if you use too much smoke the queen is likely to get scared and will run from one comb to another, making it difficult to find her.

Combs Get Mouldy in Winter

Question: In wintering my bees I have trouble with some of the combs near the outer walls getting white mould on them. Could you give me the reason for this, or what can I do to prevent it?—J. C. Ehlers, Ill.

Answer: In some parts of the country where the humidity is high during the winter months, it is not uncommon to find some of the combs, especially those near the walls of the hive, to be somewhat mouldy. A small amount of mould is not likely to do any harm, but when combs become very mouldy it is difficult for bees to clean them up satisfactorily, even after warm weather arrives in the spring. One of the major problems in wintering bees in the North is to keep the interior of the hives reasonably dry and free from excess moisture which eventually results in mouldy

combs. Beekeepers are now finding that a small upper entrance in the front of the hive helps to expel excess moisture. Some beekeepers are boring a ¾-inch hole about half way up, just above the hand hold in the front of the hive, in the upper brood chamber, where wintering is done in double brood chamber hives. This small hole also gives bees a chance to fly out during the warm days of winter when they need a cleansing flight. Some beekeepers do not like to mutilate their hives by boring holes in the front, so they provide a small entrance at the very top of the hive by cutting a notch one inch wide in the rim of the inner cover, turning the inner cover upside down during the winter. Of course, the outer telescope cover is placed over the inner cover and pushed forward as far as it will go to permit space for the bees to fly out and in the small opening at the top. The telescope cover projects down over the small opening, preventing the cold air from blowing directly into this small top opening. Some inner covers are now made with this small opening in the rim.

Getting Rid of the Moth

Question: How can I keep moths out of supers not on the hives?—John Ball, No. Car.

Answer: All supers of combs stored in the honey house should be piled and covered carefully so that no moths can gain access. However, if the combs contain eggs from the wax moth when taken from the hive the wax worms will develop later on. If moths should appear in stored material, and yet the combs are not badly affected, they may be given to strong Italian colonies to clean up. If the condition is more serious the combs will have to be fumigated. In this case place at the top of the pile in an empty super a pan containing carbon bisulphide and leave tightly covered until the next day. The fumes are highly inflammable when mixed with air, so the fumigation should therefore be done outdoors away from buildings. At 70 degrees F., 10 cubic feet of space requires about two ounces of carbon bisulphide for complete saturation. This kills everything except the eggs. In about 12 days, when the eggs hatch, another fumigation is necessary. In estimating the amount of bisulphide needed it should be remembered that the empty combs occupy a part of the super space and, if filled with honey, they will probably take up as much as two-thirds of the space. In order to prevent all trouble from the wax moths in hives occupied by bees, it is only necessary to keep strong colonies in modern hives, and supplied with good Italian queens.

Processing Granulated Honey

Question: I have some honey which is now old. When we heat it on the stove so as to liquefy it, it doesn't take long before it's back to sugar. How can it be handled so that it will not, at least for a month or two, turn to sugar? — L. E. Schwab, Ill.

Answer: To thoroughly liquefy honey so that it will remain in a liquid form a reasonable length of time, at least until it is in the hands of the consumer, the container of honey should be placed in a wash boiler or similar utensil containing water over a gas hot plate. The container of honey should rest on a couple of sticks so that the water may circulate under the bottom of the honey container. The water should be made as hot as the hand can bear and kept at that temperature until the honey is thoroughly liquefied. It is an advantage to stir the honey occasionally. After the honey has remained in the hot water for one or two hours it should be thoroughly liquefied. This treatment will retard granulation for a time at least. Those who put up honey in glass should heat the honey to about 160 degrees F., then place the caps on the jars while the honey is hot. This would require a liquid thermometer to measure the temperature of the honey so that it would not be overheated. If the honey is kept at a temperature of 160 degrees for about 20 or 30 minutes this tends to retard granulation and will also destroy any yeasts that might be present to cause fermentation.

To Pack or Not to Pack

Question: I have six colonies of bees in two-story hives which I started with this past June. They are in top condition, and now for the problem. I formerly kept bees in Pennsylvania where packing was a must as the temperature would drop to 10 or 15 degrees below overnight. During my spare time evenings I built six packing cases of half-inch matched lumber, roofing cover, bound on all four edges by angle zinc. The cases are all painted with

(Continued on page 724)

XUM

A Talk to Beekeepers

By M. J. Deyell

Prior to 1934, Gleanings did not carry Talks to Beekeepers in the November and December issues. The reason is that bees, especially in the North are in a state of quiescence during those two months and therefore no manipulation of hives is necessary. In some instances beekeepers who have put off packing their bees have to do this work during November. Since 1934 we have included Talks to Beekeepers in the November and December issues, and usually these consist of a summary of activities of the past season.

And so, in this Talk I shall review briefly what has taken place during the past season in this and other regions and perhaps point out some of the mistakes that were made in management and seek to avoid a repetition of these mistakes in the future. I wish also to bring in some experiences of former years as well as this past season. It should perhaps be said that some Gleanings readers who live in countries away "down under" such as Australia and New Zealand are now approaching spring and therefore these talks will not be apropos for them.

In a previous Talk I raised the question as to which hemisphere is ahead in point of time, as related to seasons—the North or the South. Apparently, readers considered that question too silly or perhaps irrelevant for consideration.

Cross Bees

Something happened in one of my yards this past summer which I rather hesitate to mention. This yard contains about 30 colonies and up until this past season the bees there have been reasonably gentle and easy to handle. However, early in the summer I noticed there were some cross bees in the yard. They would follow me around, batting their heads against my wire bee veil, and trying to make life miserable for me. In fact, they succeeded.

One evening during a time when very little nectar was coming in, I visited the yard and opened up some hives which I perhaps should not have done. This yard is near a railroad track. While working the bees I noticed a gang of section men a few rods down the track from the apiary. It was about quitting time for the men and also for me. As I drove away from the yard I had to follow a path parallel to the railroad in order to reach the main road. Unfortunately, the men working on the railroad came along about that time and some of the bees that had followed my car took their spite out on the men. Well, the language they used was far from suitable for recording here. I couldn't blame the men. They were in no way at fault. The bees and I were the guilty culprits. Three of the section men were stung on the head. I managed to pacify them in due time. There must be one or two vicious colonies in that yard although I do not yet know which are the offenders. I have been introducing queens from different breeders—mentioning no names.

These bees simply look for trouble. One day I drove up to the yard and as soon as I got out of the car one stung me on the neck. Another day I had gone down the railroad with my rifle, and when I returned and got opposite the bee yard one of those savages flew out and got me on the neck. The queens in the colonies which are making the trouble must be gotten rid of in order to introduce new ones of a gentler stock.

Obviously, such bees can not be kept in town especially if the apiary is located in an area where there are dwelling houses. We must have bees that are reasonably gentle to handle.

An Unusual Season

Most of us are likely to say that the past season was unusual. We had a rather heavy dandelion honey flow the first week in May. Bees actually stored some surplus from this source, which is definitely unusual for this locality.

The flow from the clovers was disappointing. We did not bother to remove supers from the hives because they contained a mixture of different kinds of honey. We left the honey in the combs to be mixed with fall honey.

September was a cool month in this part of Ohio and quite generally throughout the North, so we un-

derstand. The first ten days in October were quite warm and during that time the scale hive gained 36 pounds.

During May the scale hive gained 25 pounds; during June 11 pounds. The hive lost two pounds during July, gained five pounds in August, and 20 pounds in September, and as already stated, 36 pounds during October. It is now October 17 and the honey flow from asters appears to be over.

Are Seasons Changing?

About 30 years ago, when we wintered colonies in single-story hives, it was customary to feed sugar syrup during October. We usually began feeding the first of October and planned to finish the third week in the month. Obviously, we would not do winter feeding until practically all of the brood had emerged from the combs in the brood chambers.

It is possible that the seasons have not been changing so much as the flora which constitutes our major fall crop. During recent years there has been an increasing amount of goldenrod and aster. Years ago it was uncommon for bees to store much surplus from goldenrod and aster. During the past decade bees have stored some surplus from these sources each fall. This means that brood rearing is continued longer into the fall. At present, normal colonies have brood in from three to five combs. Such conditions did not exist 25 or 30 years ago.

It is possible that larger colonies have more brood in the fall because of our wintering in double story instead of single-story hives. In any event, in regions where wild aster is prevalent it is quite difficult to get the honey off the hives and extracted before cold weather sets in. It does seem, however, the falls of late extend further into the winter season. This may be imagination on our part and weather records may not bear out this supposition.

Bees Carrying Pollen at 51 degrees F.

One dark, cool, cloudy morning—September 29 of this year to be exact—I stood beside our scale hive west of the Gleanings office, watching the bees at the hive entrance. We have a thermometer on a tree beside the scale hive and it registered 51 degrees F. As I watched the entrance of the hive I saw a number of bees carrying pollen—not only one or two, but a few dozen bees. I do not know where they were getting the pollen. What surprised me was to find bees collecting pollen in such a cool atmosphere. I believe some of the bee books say that a temperature of 45 degrees will eventually numb the muscles of the wings of the bees. We have observed that during flight days in winter bees rarely do much flying until the temperature gets above 50 degrees. They may leave the hive for a short time when the temperature is around 40 degrees, but if they do not get back into the hive soon after leaving it, they may drop down on the ground or snow, paralyzed with the cold. But what I cannot understand is how the bees collect the pollen when the atmosphere is so cold. Perhaps some of the readers and scientific men can explain.

Some few years ago in western Ohio, while visiting one of our honey-producing apiaries, we were driven to shelter by a rain storm which came up rather suddenly. When the rain stopped we walked over to the hives and observed a few bees carrying in pollen right after the rain. Surely those bees did not collect the pollen after the rain when the vegetation was soaking wet. Perhaps they found a temporary shelter until the storm had passed, then flew into the hives. Has anyone had a similar experience?

Storing Honey Through a Hole in the Inner Cover

During the past few years I have had occasion to place an empty super with drawn combs on top of the inner cover with the center block removed, placing the outer cover over the super. When there is a honey flow on, the bees will invariably carry honey up through the small hole in the inner cover and store it in the combs of the super, even though the super below the inner cover is not completely filled. Just why the bees should do this when there is plenty of comb space below, I am unable to say. When I stop to think about it I am wondering if perhaps we have been overlooking some principle

(Continued on page 725)

XUM

American Honey Institute News Notes

By Harriett M. Grace, Director
Commercial State Bank Building, Madison 3, Wisconsin

Mrs. Grace at her desk where she manages the activities of the Institute

Across the page you see illustrations of the recipe leaflets that the American Honey Institute offers to beekeepers. Much has been said about these leaflets. For instance, Gleanings in the July issue printed a short resume of the Institute price list for their literature.

No one can be reminded enough of the value of such leaflets—value to be gained through wide distribution and actual trial of the Honey recipes by the housewife.

This reminder comes at an appropriate time. November is the middle of the Honey season. Beekeepers can be pushing Honey for use on the Thanksgiving table, and at the same time be preparing their Honey gift boxes for Christmas. Right now Honey recipe leaflets reach the prime of their effectiveness.

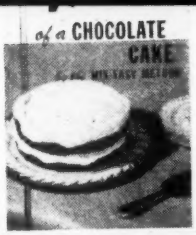
It is up to you to be sure they hit their target—the homemaker, your customer!

The following is an up-to-date price list of literature now on sale at the offices of the American Honey Institute. Read it carefully. Remember as you read that one leaflet given with each purchase of Honey will do more to assure you of a return customer than any other factor.

These leaflets were printed because the American Honey Institute believes that the beekeeper needs this kind of help. Past experience has shown this assumption to be correct. We are sure the future will follow suit.

New Favorite Honey Recipes — 56 pages	$5.00 per 25
Old Favorite Honey Recipes — 52 pages	10.00 per 100
Milk and Honey Treasures	5.00 per 100
Lemons and Honey	5.00 per 100
Honey — 12-page nutritional book	3.00 per 100
Honey Specialties for Bakers — Enlarged	15.00 per 100
Honey for Breakfast	1.00 per 100
Two New Favorite Honey Cake Recipes	.75 per 100
Two Sweet Gifts, Citrus Fruits and Honey	1.00 per 100
Honey Iced Tea Recipe Cards	.25 per 100
A Honey of a Chocolate Cake	.60 per 100
Honey and Cereals	1.00 per 100
Honey to Start the Day Right	1.00 per 100
Every Meal a Guest Meal with Honey Recipes	1.00 per 100
1950 Calendar — Back page plain for imprinting	1.00 per 100
Display Cards — "Grown-ups"; "Honey Boy"	.25 each

Everyday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Fruit
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Honey
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Honey
TO START
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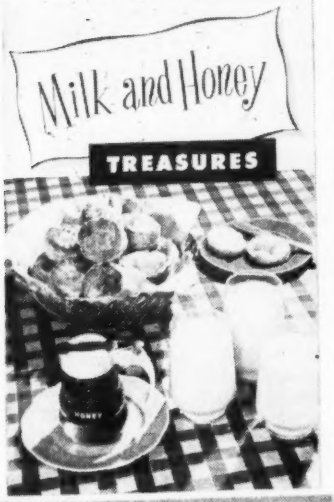
Two
New Favorite
honey recipes

A Sweet Combination
HONEY AND CEREALS

Honey
for Breakfast

Two
Sweet
Gifts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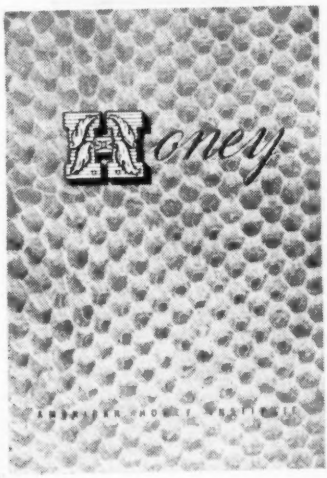
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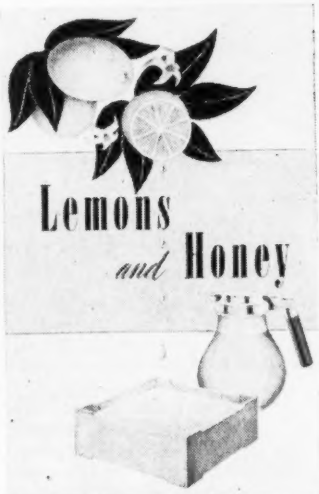
Lemons
and Honey

Old Favorite
HONEY
RECIPES

New Favorite
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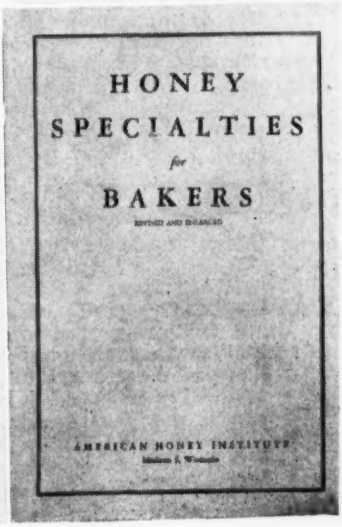
HONEY
SPECIALTIES
for
BAKERS
AMERICAN HONEY INSTITUTE

XUM

Editorials

Honey Price Granted

Congress passed the so-called Anderson Farm Compromise Bill October 19 and honey is listed as one of the five agricultural crops to come under mandatory price support of from 60 to 90 percent of parity. Other items in the same classification are wool, mohair, Irish potatoes, and tung nuts.

Just how the law will be administered is uncertain but it is safe to assume the following:

In September the parity price of honey was 17.4 cents per pound. It is likely that when the law goes into effect in January 1950 the parity will be more or less than this figure. Most items in the mandatory price support classification to date have been set at the minimum support percentage of parity so that 60 percent of, say, 17.5 cents would be 10.5 cents as the support price for honey. This is somewhat lower than the 12-cent figure set as a goal by the American Beekeeping Federation; 12 cents would be roughly 68 percent of parity. It is unlikely that higher than 60 percent will be set unless very good reasons for the higher figure can be shown by the industry.

A price support of 10.5 cents per pound will be beneficial and a stabilizing influence on the honey market in areas where production per colony is high but in the low yield — high cost production areas where the pollination value of the bee is oftentimes most important the benefit of a 10.5-cent support may be mainly indirect.

Various plans of support are possible. One of these most discussed at the House Agricultural Committee hearing was support by government loan and it is quite likely that support for honey will take this form.

There are various methods under which government loans are handled on agricultural commodities ranging from a simple agreement to purchase the unsold crop to an outright loan. It is difficult to forecast at this point how it would be handled for honey if this method of support were used. In the case of wheat the loan is made to the producer through the County Production and Marketing Administration Office and the Commodity Credit Office. The wheat is stored in the producer's bins. If he is able to sell the wheat some time before the end of the loan period a charge of 3 percent interest is made. If the wheat is not moved by the end of the loan period it may be taken over and stored by the Government or the loan may be extended. In either case no interest is charged on the loan although any degrading during storage may be charged to the producer.

Credit for the price support on honey goes largely to the fine work of the officers of the American Beekeeping Federation and the financial help of beekeepers over the country.

While many producers question the advisability of support prices in general, there seems little hope of an unsupported commodity making its own way against a vast number of subsidized and otherwise controlled commodity prices. Real progress by the industry in the long run can come only through better merchandising of honey and a general realization by the farmers of the importance of the honey bee as a pollinator of important food crops, and this backed with rental payments to the beekeeper for use of his bees for this purpose.

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Honey Report for October 1949 According to the latest report from the U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C., the 1949 honey crop for this country is estimated at 229,751,000 pounds, which is 11 percent more than last year's crop. This estimate is made from a mid-September report from about 5000 beekeepers over the country. The per-colony average this year is estimated at 41.1 pounds as compared with 36 pounds last year. The 1949 crop is being produced by 5,591,000 colonies which are 2 percent fewer than last year. In mid-September beekeepers had 115,342,000 pounds of honey on hand to sell as compared with 97,641,000 pounds at the same time in 1948.

According to the Dominion Bureau of Statistics, Ottawa, Canada, the honey production in Canada is estimated at 31,286,000 pounds which represents a reduction of 31 percent since last year. It is a fact, however, that in 1948 a record crop was produced in Canada—45,145,000 pounds.

The number of colonies of bees in Canada is estimated at 496,150, and the per-colony production of honey this year is estimated at 63 pounds, whereas the per-colony production last year was 79 pounds.

As brought out in a former editorial, the larger per-colony yield in Canada over U. S. may be attributed to longer days of sunshine during the summer, and more favorable conditions for nectar secretion. If these larger per-colony yields could be attributed to better beekeeping, we in this country should improve our methods of apiary management.

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How Bees Winter Not all beekeepers are familiar with the manner in which bees live through the winter in the North. We have asked some beekeepers in the northern latitudes how their colonies manage to live during very cold spells of winter. Their reply in general was: "I guess they just huddle together to keep warm."

The following by Dr. C. L. Farrar, head of Bee Culture Field Station at Madison, Wisconsin, from his Circular No. 702 "Production Management of Honeybee Colonies in Northern States" should help to answer this question:

The cluster protects itself from external temperatures by forming an insulating shell of bees 1 to 3 inches deep to conserve the heat produced by the more active bees in the center of the cluster. It contracts as the air temperature falls, reducing the surface exposed to radiation and increasing the concentration of bees to produce heat energy. A temperature is maintained in the center sufficient to conduct heat to the surface bees so that their temperature will not drop below approximately 45 degrees F., although the temperature in the hive a few inches outside the cluster may fall to zero or below.

Hive insulation allows the cluster to contract more gradually when there is a sudden drop in the external temperature, and gives it more time to organize its position in relation to the stores, so that fewer bees are left stranded.

The cluster does not heat the unoccupied space in the hive. During a protracted cold period the temperature of this space will become almost as low in the packed as in the unpacked hive. Too much packing will prevent the colony from responding to warm periods during the day, which would allow the cluster to shift its position on the stores or even allow the bees cleansing flights.

The cluster itself must protect the colony against low temperatures, and the organization of the colony in relation to its food supply will determine whether or not it winters in good condition.

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Wax Rendering Plants for AFB Combs Our readers will be interested in the article on page 680 of this issue entitled "Wax Salvaging Plants in California", by H. M. Krebs, State Apiarist of California. A few years ago the average beekeeper and certainly the bee inspector would have frowned on such a project. However, if such plants are properly constructed and under the supervision of persons well qualified to do the work properly, we see no reason why they should be condemned. When we consider the many thousands of pounds of good beeswax burned up in a single season, not mentioning frames, it would appear that the California project is worthy of serious consideration by other states. Such a wax salvaging plant under the supervision of state officials would, in our opinion, be more feasible than plants operated by individual beekeepers. In any event, we shall be interested in the future of the project in the light of actual results obtained.

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Aster Pure aster honey is quite light in color. However, it is usually mixed with goldenrod and other flowers. It is the last honey plant that blooms in the fall—in this part of Ohio. Asters are common over most of the Northeast and some of the southern states. These fall flowers are unusually plentiful. Just yesterday we talked to a farmmer beekeeper near Medina who has lived here during the past 40 years. He said that asters have become more plentiful of late years due to the increasing amount of wasteland.

We had, during the first ten days of October, one of the heaviest aster flows ever experienced here. Brood chambers are plugged full. Queens have been crowded out and in some instances bees have built brace comb between the top bars of frames because of not having suffi-

XUM

cient comb space for incoming nectar.

The aster honey we have extracted is very thick with a moisture content below 17 percent and the flavor is pleasing.

Some say a late aster flow may cause poor wintering. If the weather following the flow continues warm enough for a time for the bees to cure the honey properly, it is not likely to cause any trouble provided the bees have a few cleansing flights during the winter. However, if cool wet weather follows a late aster flow and winter sets in early and remains cold with no warm spells for bee flights, a heavy winter loss may be expected. Let us hope the weather man may be kind to beekeepers this winter.

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Birth of "Apimondia" According to the report on the 13th International Beekeeping Congress in Amsterdam (see page 631 for October) the most important event was the birth of "Apimondia", a world-wide organization of beekeepers, to promote international beekeeping.

Dr. Morgenthaler of Switzerland was elected chairman of a committee of seven to carry out the objectives of this organization when formulated.

It is hoped that this is only the beginning of a program that will foster a deep and lasting friendship among beekeepers throughout the world.

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Women Needed on Beekeeping Programs As we attend bee meetings here and there over the country we note the absence of women on programs. There are, of course, a few exceptions to this.

In some instances women help their husbands in the apiary, especially when honey is being extracted. There are some women who own and operate backlot apiaries, and others who are engaged in commercial honey production and manage a series of outyards.

Wives and daughters of beekeepers are or should be interested in recipes which include honey. Some of our women—for example, Mrs. Nielsen, a regular contributor to our journal—specializes in developing new recipes and uses for honey.

If more women were invited to appear on beekeeping programs to share their experiences in using honey in the home, more women would attend bee meetings.

Let's not forget that even though men perform most of the labor in the production of honey, it is the women who eventually put honey on the table.

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Beekeeping Terminology It seems essential that those who write and talk on topics pertaining to beekeeping be very careful in the selection of words or phrases used. Should it be necessary to use a somewhat uncommon word in ordinary parlance, such a word should be defined—especially for the benefit of beginner beekeepers or those who intend to begin.

We cannot forget the young man, intensely interested in beekeeping, who listened eagerly to a talk on package bees. At the conclusion of the talk he asked the speaker in all seriousness, "Just what is the difference between a package bee and an ordinary honey bee?". Some members of the audience were rude enough to laugh but the speaker graciously clarified the matter.

When a speaker or writer has occasion to use the word foundation in connection with hive parts he should surely say comb foundation or the term might be interpreted as meaning something to put under a bee hive to hold it up.

The terms swarm and colony are sometimes used synonymously, as also are brood nest and brood chamber. As we understand the term brood nest, it is that portion of the combs in a brood chamber occupied by eggs and brood. The term is also applied to that part where bees are clustered when there are no eggs or brood, as for example during the short period of quiescence of late fall and early winter in the North.

The brood chamber is that part of the hive in which the brood is reared.

There can be and are differences of opinion regarding the correct usage of beekeeping terminology. However, the important thing to keep in mind is to clarify or define unusual terms if and when necessary, in order that the reader or listener, especially the beginner, may be properly informed.

From North, East, South and West

SOUTHERN CALIFORNIA, Oct. 1

Weather: October finds Southern California basking in sunshine but with nights cool enough to make an additional blanket comfortable. This delightful weather follows one of the hottest spells we have had all summer. This month we are looking and hoping for at least some showers of rain to wash the vegetation and settle the dust. One beekeeper who has several hundred colonies that he has accumulated by hard work during the past 15 years asked the writer if he ever saw a good wet season when we had enough rain. We might ask in return, "How much is enough rain?" The answer to the same question put 30 years ago would probably have been that 20 inches would be a good rainfall. But now with practically every available water supply being used and with streams and reservoirs being low, it is very hard to say just how much rainfall would be called enough.

Market: Some producers have sold their honey on the open market while others placed theirs with the cooperative association. The market will take the honey but there is no great demand—in fact, it is rather slow.

Miscellaneous: The Los Angeles County Fair at Pomona has closed a very successful year. Large crowds attended and the exhibits were unusually fine. There were several very excellent exhibits of honey, beeswax, and live bees. Riverside County's "Beekeepers" won the first prize. It was a very striking display. A large card in the background read "Bees Fill the Food Basket Through Pollenization". From the center of this card many ribbons led to different objects on a table in the foreground. Somehow we felt as though we were playing a game with no end of a thrill when we traced each ribbon to a large melon, a squash, some peaches, walnuts, almonds, or different mounds of seeds. No one could leave that exhibit without feeling a renewed interest in bees and I believe at least a little grateful for their efforts in giving us a full food basket.

San Bernardino and San Diego Counties also had very fine exhibits. They had the usual full amounts of comb honey, liquid honey, and beeswax. There were also good looking displays of foodstuffs such as cookies, cakes, and candies made with honey.

A number of individuals had very creditable exhibits. There were some large frames of comb honey with bees working on them. So to anyone at all interested in beekeeping there were many very interesting sights to be seen.

Since the revolution that has taken place during the past comparatively few years—namely, migratory beekeeping—the beekeepers have sharpened their pencils and have gone to work. They are figuring the cost of operations, labor, truck expense, deterioration, etc. They are getting right down to brass tacks, as the old saying goes. Especially when the price of our products drops do we begin to figure closely. And the beekeepers are finding that migratory beekeeping is quite expensive.

This time of year all Southern California beekeepers are cleaning up and getting their bees ready for winter. Most of the time there is a little nectar or pollen to be gathered but we must be sure that there are plenty of stores for the coming months. — L. L. Andrews, Corona, California.

NORTHERN CALIFORNIA, Sept. 30

Weather: California likes to do things in a different way, even different from previous records. August was one of the coolest months for many years and now it seems as if Old Sol is trying to make up for lost time. Fair Week is generally warm but the hot period was extended way beyond

XUM

the limits of scheduled events. In other words, it was warm in northern California for most of this month. The south winds generally bring relief and the hot temperatures seldom last for more than a week or two at a time. The fields are tinder dry and brown, and rains cannot be expected to reduce the fire hazard until later.

Condition of Honey Plants: As one can expect from the state of the weather, most of the summer honey plants have gone to seed or dried up. Tarweed is still odoriferous when one passes fields of it along the highway, and blue curls or camphor weed is showing to advantage in some valley and foothill locations. On a recent trip to Southern California I noticed that jackass clover **(Wislizenia refracta)** was in full bloom in San Joaquin Valley. It grows in dry, sandy soils where no agricultural plants will grow without irrigation. Where it had been mowed along the highway, the short plants were in bloom right down to the ground, making a much prettier appearance than the dried weeds and sandy soil. The cultivation of this plant along the highway in the area in which it is found naturally, would add to the available nectar and pollen plants for many of the pollinating insects as well as beautify the roadside.

The Honey Crop: Some beekeepers have reported 30 to 40 pounds average and a few have indicated that their returns have been "satisfactory", considering the weather conditions this summer. Reports from some areas indicate that the yield was better than usual. This spotted condition cannot be explained from the viewpoint of weather conditions because in some cases only 20 or 30 miles separate areas where little or no honey was produced from those where average to good yields were obtained. On the average, though, those beekeepers who went into seed alfalfa areas in Northern California came out with very little if any surplus and generally nothing to show for their work in moving their colonies or for the services rendered by their bees. The seed set was heavy but the alfalfa just did not produce nectar in sufficient quantities to pay the beekeeper for his efforts. This was also true of Ladino clover which seldom yields as much as alfalfa under normal conditions.

The Honey Market: When I asked one beekeeper what he thought about the honey market he replied, "Honey market? Where have I heard that word before?" The sales are slow and **the offers are lower than present retail prices justify.** But the movement is slow and with the new honey coming in, honey is accumulating in warehouses. This is only natural as this artificial surplus occurs every year at harvest time. With prices uncertain, buyers are not laying in stocks for their future needs. **The industry needs more salesmen** who are interested in selling honey at a good price for the beekeeper. Those who sell a product are interested primarily in the profit they make for themselves rather than in the amount received by the producer and it will be ever thus in most channels of independent trade. So, the producers will have to become more interested in the retail sales of their own product. They can do this by stimulating sales through contacts with local business, civic, and educational organizations. The honey market is tied up with national conditions and beekeepers should belong to and support their own national organizations, the American Honey Institute, Madison, Wisconsin, and the American Beekeeping Federation, whose Secretary is Glenn Jones of Atlantic, Iowa. A membership fee or a substantial donation to each of these organizations will help them to promote programs for strengthening the honey market.

Miscellaneous: The state and county fairs will be over in most places by the time this appears in Gleanings and millions of people will have seen bee and honey exhibits in a majority of these fairs. What effect will these exhibits have on the sale of honey or in educating the general public to the value of beekeeping in relation to the production of agricultural products? This depends on the types and completeness of each exhibit. In our California exhibits many of the exhibitors seemed intent on conveying the information to the public that beekeeping was essential to agriculture or that honey was one of the best sweets that man, with the aid of bees, could produce. Some of

the exhibits were excellent but a majority of them were gotten together in too short a time before they were assembled. One thing most commonly lacking in the exhibits was the matter of suitable information to indicate the theme or products exhibited. It would seem desirable to have the bee journals offer a sweepstakes prize for the best exhibit made by an individual beekeeper or by a beekeepers' organization at any of the county or state fairs throughout the entire country. Could this be done?

Chemical Poisoning of Man: Much has been said in the bee journals about the dangers of insecticides to beekeeping and much more will have to be said in the future. This problem is still more serious than many believe. An unfortunate event occurred in California this past month which shows the dangers of these poisons to those who handle them or are exposed to their residues. A young entomologist, trained in the uses and dangers of spray poisoning, was overcome with the fumes or by direct contact with parathion while applying the organic phosphate to an orchard, and died within a few hours after first experiencing the symptoms of phosphate poisoning. This is the second death traceable to organic phosphates. In still another incident, three crews of 30 men each started to pick pears in an orchard near Marysville, California. Two of the crews worked in a block which had been sprayed with 2½ pounds of parathion per acre 11 days previously. By mid-afternoon many of the pickers felt ill and were taken to a hospital where their symptoms indicated phosphate poisoning. By evening 18 to 20 men had reported to the hospital for treatment and each patient was given 1/100 grain of atrophine intra muscularly. Nine had to be kept overnight for observation. The effect was caused by the fumes of residue material left on the leaves of the trees. These are but two additional examples of the **need for more efficient safety regulations for the general public** in the sale and use of toxic materials on cultivated crops. Surely no insect problem is so urgent as to justify the uninhibited sale and distribution of materials which are so toxic as to endanger the lives of those who use it.—Prof. J. E. Eckert, University of California at Davis.

KANSAS, October 8

Weather: For the most part, Kansas had a relatively cool summer. With this coolness there was a scarcity of rain. During July, August, and the latter part of September, there was a deficiency of rain in most parts of the state. The rainfall during the last three days of August was sufficient to produce normal rainfall for the month. During the first two weeks of September the state received only two-thirds of the normal amount of moisture for the month.

Plant Conditions: A year ago there was little alfalfa planted because of the dry weather during August and the first ten days of September. This year, however, good soil moisture conditions prevailed at alfalfa seeding time. This means that many more alfalfa fields will come into production next summer. Plants are maturing early owing to dryness. Frosts occurred in the northern part of the state at the end of September. Bees are still gathering food from a species of sunflower and aster in southeast Kansas. Southeastern Kansas has had more timely rains than the remainder of the state, and thus plant growth is in better condition.

Condition of Colonies: Colonies in the northern and western part of the state are strong and are being prepared for winter. The honey flows have occurred from alfalfa and smartweed, which have enabled colonies to maintain large colony populations late in the season.

Honey Crop: The best honey production this year is in southeast Kansas. The crop was obtained from yellow sweet clover. Other parts of the state, which are primarily dependent upon white sweet clover, had only about one-third of a crop. The failure was due to rainy, cool, inclement weather during the blooming of white sweet clover. Much of the honey which is available for marketing this year has come from alfalfa and fall plants.

Market: The market appears to

XUM

be steady, and prices in the retail stores are practically the same as at the beginning of the season of last year. As the marketing season advances there probably will be more of a demand for honey because of the short crop in this state.

Miscellaneous: The Kansas State Beekeepers' Association held its annual meeting at Topeka, Kansas, on October 2, 1949. This was a most spirited meeting in the matter of election of officers. The attendance was made up of representatives from various parts of the eastern half of the state. — R. L. Parker, Manhattan, Kansas.

MANITOBA, September 27

Weather: My last report was written May 4. The final crop this season has been so variable that some beekeepers are feeling very blue about it and others are elated over a bumper crop. Lack of rainfall resulted in poor per-colony yields in some areas where honey plants were plentiful. In my last report I gave some statistics on Winnipeg temperatures from January to April. The following table will give some idea of the summer climate.

	Mean	Min.	Max.	Precipita.
May	53.0	23.8	84.4	1.71
June	63.4	30.1	97.5	2.71
July	67.8	43.7	95.4	2.29
August	70.3	37.6	104.8	2.27

It will be seen from the table that temperatures here can get quite high. On the other hand, our period of security from frost is short. This year we had a frost on June 7 which killed most of the fruit blossoms and resulted in generally barren apple and plum trees, which grow here quite successfully if you have the right varieties. To date we have escaped a September frost. Flowers are blooming profusely in deeper than normal colors and tomatoes are still ripening in the gardens.

Crop: The preliminary estimate of average yield per colony in Manitoba is 98 pounds per colony. The number of colonies is considered to have been reduced by about 25,000 from 1948. Total crop will be somewhat below 5,000,000 pounds as compared with a long-time average of about 5,500,000 pounds. Producers report average yields of 40 to 60 pounds in many parts of Red River and adjoining areas. Good crops have been obtained in the western and northern districts and one beekeeper adjacent to eastern bush country obtained an average of 300 pounds from alfalfa.

Honey Plants: Sweet clover continues to be the backbone of the Manitoba honey industry. The sweet clover weevil is its most obvious pest and has succeeded in almost eliminating sweet clover from the Red River Valley where this crop used to flourish. Better crops than ever before have been credited to alfalfa this year and in the Morden area sunflower honey is obtained. Sunflower honey in Manitoba is golden in color and the flavor is excellent. Buckwheat was a rarity here until recently but it is gaining in popularity in some districts much to the consternation of the average beekeeper. In this land notorious for white honey, buckwheat is not popular.

Marketing: The Dominion Government bought about 4,000,000 pounds of the 1948 crop and it is still in storage. With this amount off the market and a below-average Dominion crop this year it is expected that the price will remain fairly steady. Beekeepers are now selling honey for 15 cents to 17 cents in customers' containers. Advertising of honey during 1948 appears to have increased sales and if it can be repeated this year there is a good chance that the present crop may be disposed of at reasonable prices.

Beekeepers are paying a levy of one-fifth cent per pound on metal and paper containers this year and the container companies will turn the proceeds over to the Canadian Beekeepers' Council. It is hoped that this money will provide a fund for consistent advertising in the future.

General: The Manitoba Beekeepers' Association will hold its annual convention November 17 and 18 at the Marlborough Hotel in Winnipeg. This year we will be favored with the presence of many of the members of the Canadian Beekeepers' Council, as the annual meeting of this organization will be held in Winnipeg following the convention.

There has been a slight increase

in exhibiting honey at Fairs during the past year, and it is about time. We are continually missing opportunities to put honey before the public when we are too lackadaisical to get honey into all the fair competitions, local, state, provincial, or national. Millions of people see the competitive and display material at all the fairs across the U.S.A and Canada. Results of competitions are published in the newspapers which stimulate interest among friends and neighbors in the exhibitor and the product. The opportunity for very valuable and practically free advertising is there but we aren't beginning to make use of it. There is an opportuntiy for extension apiarists, association executives, and informed beekeepers in general to start a crusade to really swamp the fairs with honey. Officials connected with fair boards and other agricultural people may then begin to put some faith in the beekeepers' statement that honey is an important crop.—E. C. Martin, Winnipeg, Manitoba.

NORTH DAKOTA, October 8

Weather: The weather has been fairly ideal for the beekeeper and also for the farmer to get his crops harvested. There have been only a few light frosts to date. Rainfall over most of the state has been fairly adequate. There are a few areas in the northwest and central parts of the state where a serious deficiency of soil moisture exists.

The honey flow tapered off early in August over most of the state with the result that the average per hive production will probably be less than for most years past. Brood rearing too slackened off early which all adds up to colonies going into the winter with less stores and young bees than they should have.

Miscellaneous: Honey plants, especially alfalfa, have been more than adequate for the number of colonies in the state but there is a growing concern regarding the danger of losing bees because of the indiscriminate poisoning programs waged by some farmers. Farmers generally know the value to be gained by destroying lygus bugs, grasshopper, and other insect pests but some are slow in realizing the importance of correct timing of the spray or dust applications. They are told that all injurious insects are present in their alfalfa fields before the plants come into bloom and that then is the time for most effective control. But it seems that many of them want to wait until they see the fields in full bloom before deciding to run the fields for seed. If the field is cut for hay then it seldom is treated with insecticide. — J. A. Munro, Fargo, North Dakota.

ILLINOIS, September 24

Weather: We sometimes wonder what has become of the good old fashioned honey-producing weather. For several years this part of Illinois has not had the right kind of weather during our clover blooming period. For three years within the past seven we have had excessive rainfall during this blossom time. This season the rains were scattered and the temperature nearly ideal but the humidity has remained high all summer. Apparently there was more moisture in the atmosphere than in the freshly-gathered nectar. The result has been honey of poor quality as far as flavor and body are concerned. Recent rains have benefitted the young clover plants for next year. Cool weather of the past few days has interfered with the heartsease flow.

Honey Plants: This year sweet clover was very scarce—only two fields of any size and value were found in the entire country. Alsike clover was more plentiful but not enough to do much good. Throughout most of the state where the writer has traveled there appears to be an abundance of sweet clover for next year except in the far north-central part. Farmers having pasture land planted considerable Ladino clover this year.

Honey Markets: The demand still remains good for section comb honey. The comb crops have been small and it will take a bumper crop to halfway satisfy the buying public. Bakers are not back in the

honey-buying mood since the war. We are selling to about 3 percent of those we were before the war. We just completed our State Fair and although the attendance was below normal due to polio, the demand for honey was good. Any fair is a good place to tell the story of honey, bees, and their relation to agriculture. We are now planning a larger and more complete honey show for next year. The more complete the show is with educational displays the more people will be interested in it.

Miscellaneous: We were delayed for several days in finishing this report. The heartsease flow is now over and very little surplus was gathered. Yesterday the aster flow started in one of our yards. Only two yards are located in the aster area. The flow promised to be heavy if weather conditions remain favorable. Bees are going into winter in much better shape than a year ago. The colonies have a better cluster of young bees and brood chambers are very heavy. Interest in comb honey appears to be reaching a high degree and it should as we are now booking orders for 1950 delivery. This is quite a different story from the chaotic condition found in extracted honey sales. The January meeting in Biloxi, Mississippi, should be well attended as most of us from up North enjoy a trip to our southern neighbors. This reminds the writer that he must remove some of his fishing tackle from its long storage in moth balls. See "you all" in Biloxi.—Carl E. Killion, Chief Apiary Inspector, Paris, Illinois.

OHIO, October 1

Weather: During the period of our summer nectar flow here in Ohio, there has been considerable variation in weather conditions and also in honey production. In some portions of the state it has been too wet while in other portions too dry. At other times the weather was ideal. On September 24 wild aster was just beginning to produce nectar and the bees were more than anxious to do their part. Here in the central part of the state we have had a fair aster flow. Rain today has prevented them from flying. Weather conditions permitting, it may continue for several days. Conditions in other portions of the state are no doubt quite different.

Bees and Honey Crop: Bees in most parts of Ohio wintered over well and most beekeepers had their colonies at the proper strength when the main clover flow began. Others attained their growth on the main flow. This, however, is not good colony management. The honey crop over the state varied considerably and the grade of honey was not quite up to standard in some sections. Production likewise was spotted over the state. A few beekeepers produced some comb honey, also some chunk honey, and this was the wise thing to do. However, the flow shut off rather abruptly and left many partly finished sections. This was unfortunate. The price on comb honey was fair and the demand will no doubt exceed the supply. Next year beekeepers will produce comb honey. Just how soon it will reach the saturation point is unpredictable.

Aside from the low price of extracted honey the greatest drawback to beekeepers in Ohio is the absence of suitable bee pasture. White sweet clover is definitely on its way out. Alsike was in much better acreage this year but it is a short flow and the greater portion of it was cut for hay shortly after the nectar flow started. Dutch white clover was abundant but produced little or nothing. A great deal of Ladino clover has been planted over the state. How good a nectar-producing plant it will prove to be in Ohio remains a mystery. Intensive farming has increased the bank roll of the farmer and materially decreased it for the beekeepers. The returning of more beef cattle and the farmers going to a four-year rotation of crops is encouraging hope for all of us. This is being done by many farmers.

Miscellaneous: One of our unscrupulous honey processing and bottling concerns has placed honey on sale here in Columbus and other cities at 69 cents for 5-pound jars. Their respect for the beekeeper is not too good. How long could they stay in business were it not for the beekeeper? This is exactly why

many beekeepers are not in favor of a subsidy on honey. Concerns like this would be offering producers two or three cents per pound for honey, collect the subsidy, and then find some plausible excuse for them to retain it for their personal gain and charge it to research or advertising.

We as beekeepers are actually operating on a basis of approximately 10 percent of the actual income from our bees. The other 90 percent is for pollination of which most of us get NO RETURNS! If the Government is going to give the beekeepers assistance — and they have to all other departments of agriculture — why not have them start at the grass roots and place it where it really belongs and where it will do the greatest amount of good for the greatest number of people concerned. **That would be pollination.** The Government is already spending many thousands of dollars on Legume Seed Pollination Research. Why not take the beekeeper in on the deal and make it profitable for the beekeeper, the farmer, and the Government? It can be done.

For years, and perhaps for ages, beekeepers have been creatures of chance and victims of forces outside themselves. Now, by "creatures of chance" I mean that each year beekeepers put a tremendous amount of work, worry, and expense in preparation for a good nectar flow. The odds they are working against are the weather and lack of proper legume pasture, mostly due to intensive crop farming and short crop rotation. By "victims of forces outside themselves" I mean cut-throat bottlers loading the market with 5-pound jars of honey at 69 cents, which is neither necessary nor good business ethics. If the producer has to stand the loss—and he usually does—this means about 3 or 3½ cents per pound for his honey. Yes, below depression prices. This type of unethical business tactics lashes the beekeepers to rafts that are headed for the falls without means of escape. Honey alone can never compete with many of our competitive sweets, with or without a subsidy or a support price. The final answer to the beekeepers' problem is support by the government on **pollination alone** of the various crops which require honey bee pollination. This would at least be a portion of the 90 percent of the income from the bees over which we have no control. In Ohio and many other states the average colony production has been extremely low over a long period of years. With the high cost of living, labor, equipment, and transportation, and last but not least a low price for honey, the commercial beekeeper is gradually going to disappear from business. Yes, we are driven to chaos by forces beyond our control.

My good friend Dr. Donald J. Borror, Department of Zoology and Entomology, Ohio State University, has published Bulletin No. 9, Series No. 13—"Insects and Pollination". This Bulletin is copyrighted by the National Audubon Society, 1000 Fifth Avenue, New York 28, N. Y. Single copies, 15 cents. A copy in your possession would be a real asset. This is a fine piece of literature to display and read to your farmer friends where your apiaries are located. It tells and illustrates a true story all in your favor. This gives a record of the clover seed produced in Ohio and the average bushels per acre. It also shows what could be produced per acre if properly pollinated by the required number of colonies of honey bees. All beekeepers should have a copy in their possession.—W. A. Coulter, Columbus, Ohio.

NEW YORK, October 8

Weather: Here in central New York State we had very little rain all summer and what did fall was not enough to soak into the ground and do any good. The result was withered and parched pastures for the bees which slowed up their work. However, during September we had quite a few steady soaking rains that reached the roots of the plants and at this date things are about normal.

Crop: Many beekeepers here report their crop of light honey to be nearly normal despite the adverse conditions. Buckwheat will not come up to previous years which may be due to the early planting. With the dry spring the ground was in perfect condition for planting

earlier than usual and now there is little buckwheat available. We will average less than a hundred pounds per colony.

Market: The demand for honey is somewhat better than last year. With slightly lower prices, buyers are attracted and white clover is moving very well. Those having honey for sale at Farmer's Markets report a heavy retail trade in light clover. At one of these places we are informed that five-pound jars are selling easily while last year one's and two's were the favorites.

Miscellaneous: Many beekeepers do not give enough thought to the design of their honey house. For best results the progressive beeman should be an architect, plumber, electrician, heating engineer, ventilating engineer, chemist, and mechanical engineer. We can not expect this ideal, however, and must rely on other sources of information when setting up a new plant or remodeling an old one. In between the operation of unloading the filled supers of honey to the pasting on of the label is a large variety of equipment and ideas.

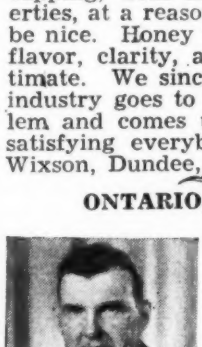
It does seem that the manufacturers of honey house equipment could offer all the pieces necessary for processing right down to the smallest fitting. Some offer extractors and tanks, leaving it up to the beekeeper to fill in between. The question of heat and how much has never been settled to the satisfaction of everyone. One large packer whom we know says he heats to 180 degrees and has had no repercussions. He steadfastly maintains that his products contains all the properties that it had in it in its original state.* He bears this out with reports from a State University which ran tests on the honey.

Honey that is mixed with pollen and wax cannot be heated too high and still preserve its clarity. Extractors do not provide heat except by pipes — possibly steam pipes — under them. This gives either too much or not enough. We believe that hot water is superior to steam but this requires a thermostatically controlled source of supply. Galvanized iron will rust out and we look forward to a complete outfit of stainless steel, a few items of which have recently shown up on the market.

What we would like to see is a complete honey processing outfit advertised—one that would do the job without having to rebuild half of it. We think that considerable improvement could be made in equipment for uncapping. On heavy work we find steam knives are a poor excuse. Another ill effect in uncapping with a hot knife is the melting of the wax which mixes with the honey. This in turn causes cloudy honey and more trouble for the packer. If there were only some way to bottle honey that would be just as it was in the cells before uncapping, with all its original properties, at a reasonable cost, it would be nice. Honey with all its original flavor, clarity, and color is the ultimate. We sincerely hope that the industry goes to work on this problem and comes up with an answer satisfying everybody. — Roscoe F. Wixson, Dundee, New York.

*[It has been found that heating honey to 180 degrees does no harm if left at that temperature for only a short time.—Ed.]

ONTARIO, October 12



October has come again as the yearly cycle of the months swings around, and activity in the bee yards begins to taper off. For the past two or three weeks Southern Ontario has been a riot of color, as tree foliage changed from green to gold and vivid red. The nimrods are getting restless, and their trigger fingers are getting itchy as they visualize evenings spent around fires in widely flung hunting camps, and the thrill of seeing an antlered buck loping across the rocks and through the bush.

Packing is in full operation now, and should be completed by the end of the month, weather permitting. From the drouth of early summer the pendulum has swung in the opposite direction. Plentiful fall rains are soaking the ground, although farmers tell me still more is needed to insure plentiful supplies of water for the winter months.

Bees appear to be in good condition. A good fall flow of nectar stimulated brood rearing with the result that good clusters of young bees compose the winter populations. One thing was especially no-

ticeable this year: the old queens failed to respond to the stimulus of the fall flow. We examined our colonies in late September and when a small or medium cluster of bees was found in a hive we looked for the queen, and in most cases found one with clipped wings, indicating an old queen. These were requeened, and the young queens will raise two or three combs of brood this fall and thus improve the chances of successful wintering.

As reported previously, the light honey crop was short. The late summer and early fall rains brought along the late clover and goldenrod, and a good crop was secured from them. As a matter of fact, most beekeepers found their late honey better as to color than the early crop. A goodly portion of the late crop was from red clover and alfalfa, and in our own case we allowed a good deal of this to go into the brood chambers and food supers. So not much feeding will be required. This is a chore we are coming to dislike more each year.

Fall is convention time, and there will be a lot of time consumed and thousands of words spoken regarding beekeepers' pasture problems and the indispensability of the bees as pollinators of fruit and legume crops. It seems to me that a good deal of this oratory will be wasted unless we can impress upon the other interested party, the farmer, that his interests are largely bound up with the well being and prosperity of the beekeeper. We as beekeepers know this to be a fact, but I question if the average farmer has given it more than a casual thought. I don't recall ever having seen more than a passing reference in the agricultural press, with one exception. We can continue discussing this among ourselves till doomsday and get nowhere. I am not trying to detract from the efforts of Ontario's Provincial Apiarist, Prof. Gordon Townsend, and the O. B. A. committee working on the problem, but their efforts should have the support of beekeepers generally. The individual beekeeper is in a strategic position in this regard. He knows the farmers in his area and can bring the matter up when opportunity offers.

Miscellaneous: I know at least one farmer who is sold on the value of bees in legume seed production. I have a yard of bees on his farm, so I see him quite frequently. In the summer of 1948 he had an alfalfa field from which he had taken a first crop of hay. Not requiring the second cutting, he turned the cattle into it when it was in full bloom. I remarked to him one day that the bees were working the alfalfa heavily. Later, after the blossoms had ripened, he discovered that the heads were loaded with seed. He cut it and threshed it and notwithstanding its being pastured and trampled by the cattle, he harvested a crop of seed above the average.

Certainly, it is a fact that in the past decade we in Ontario have had a number of poor crops. Whether we are passing through a phase or cycle, or whether it is a permanent condition, remains to be seen. Anyway, it is encouraging that our leaders in the industry, and the agricultural press, are beginning to come to grips with the problem.—Allan T. Brown, Peterborough, Ont.

TEXAS, October 8

Weather: Summer weather with relatively high temperature prevailed during most of September. However, the close of the month brought cooler and more agreeable temperature. Rainfall over most of Texas was below normal and more rain is needed to assure an adequate supply of nectar and pollen for winter stores.

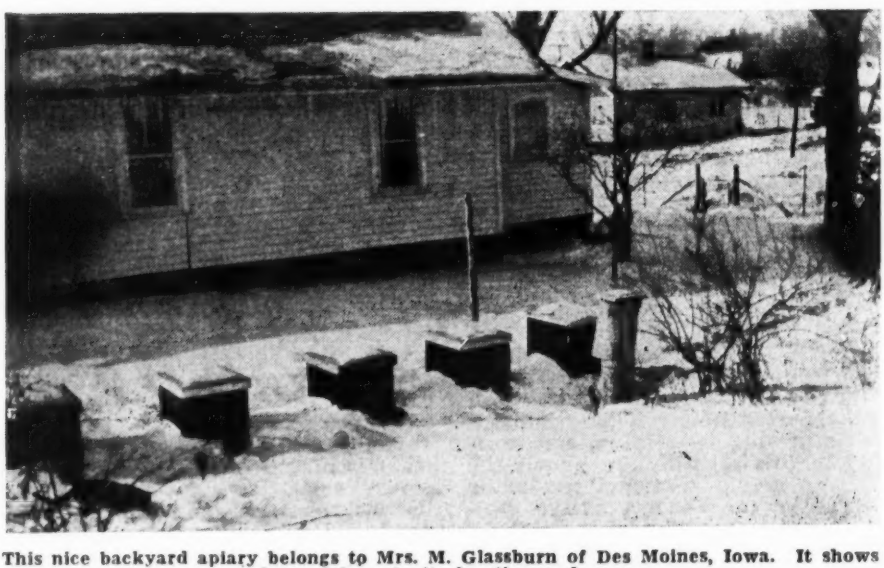
Bees, Plants, and Honey Crop: While little nectar was gathered during September, the bees obtained sufficient pollen to show an increase in brood rearing and colonies are in good condition for a fall flow. Broom weed, asters, and other fall plants are abundant and in good condition at this time to yield well during the coming week with adequate rainfall. In Southwest Texas kinnikinnick (evergreen sumac) is now in bloom and bees are getting some honey from this source. Earlier some poisoning of bees by dodder (love vine) was reported in that area. Practically all surplus honey over the state has been re-

moved from the hives and the honey crop for the year appears to be better than normal.

Market: Retail stores are well supplied with honey of the best table grade. Prices remain unchanged and there appears to be some improvement in consumer demand. Most of the current year's crop remains in the hands of producers.

Miscellaneous: According to information just released Congress passed a bill authorizing price support of honey at 60 to 90 percent of parity. This should relieve the dumping of honey on the market at less than the cost of production. There is some concern in beekeeping associations over the indifference of members as reflected by small attendance of meetings and failure of financial support to permit the organizations to fully serve the interest of the industry. These associations need attendance, voice, and financial support. This applies to the National Beekeepers' Federation as well as the state and local organizations. The last week in October has been designated National Honey Week, which time might well be observed also as state and local honey week in all honey-producing areas with a vigorous campaign directed to advertising honey. Numerous honey recipes and other literature may be obtained from the American Honey Institute. The Texas State Fair was held at Dallas on October 8 to 23. Last year this fair was attended by well over a million visitors. It is expected that bees, honey, and other bee products will be included in the exhibits. Texas beekeepers regret the transfer of S. E. McGregor, Apiculturist, Division of Bee Culture, U. S. Bureau of Entomology and Plant Quarantine, from Texas to Arizona. The Texas Beekeepers' Association held its annual meeting at College Station on October 3 and 4. Bees for pollination, particularly of legume crops, was the principal subject discussed. The officers elected for the coming year are: Nelson N. Ross, Corsicana, President; F. E. Jackson, Cameron, Vice- President; L. A. M. Barnette, Bellaire, Secretary-Treasurer. The newly-elected officers of the Ladies' Auxiliary are: Mrs. L. A. M. Barnette, Bellaire, President; Mrs. Hugh Shofner, Vice-President; Mrs. F. E. Jackson, Cameron, Secretary-Treasurer. — A. H. Alex, College Station, Texas.

A Well Protected Backyard Apiary



This nice backyard apiary belongs to Mrs. M. Glassburn of Des Moines, Iowa. It shows a love of bees in its location and care.

1949 Honey Production and Stocks on Hand Sept. 15 for Sale

From Oct. 11 Report of Agricultural Economics, U. S. Dept. of Agriculture

State and Division	Colonies of bees 1948*	Colonies of bees 1949†	Yield per colony 1948	Yield per colony 1949	Honey production 1848	Honey production 1949	Honey for sale in producers' hands on Sept. 15, 1949
	Thousands		Pounds		Thousand Pounds		
Maine	7	8	17	13	119	104	30
N. H.	4	5	39	26	156	130	84
Vt.	9	10	33	36	297	360	227
Mass.	24	28	23	15	552	420	168
R. I.	1	1	21	19	21	19	8
Conn.	18	20	33	20	594	400	188
N. Y.	219	219	55	46	12,045	10,074	6,044
N. J.	31	38	45	19	1,395	722	152
Pa.	174	190	43	32	7,482	6,080	2,006
N. A.	487	519	46.5	35.3	22,661	18,309	8,907
Ohio	321	305	35	32	11,235	9,760	4,002
Ind.	172	172	39	38	6,708	6,536	2,941
Ill.	216	192	17	30	3,672	5,760	4,378
Mich.	173	183	50	53	8,650	9,699	6,789
Wis.	195	195	38	65	7,410	12,675	8,365
E. N. C.	1,077	1,047	35.0	42.4	37,675	44,430	26,475
Minn.	290	284	75	95	21,750	26,980	9,713
Iowa	246	209	30	80	7,380	16,720	5,852
Mo.	203	183	22	26	4,466	4,758	1,713
N. Dak.	21	16	95	85	1,995	1,360	517
S. Dak.	17	16	115	95	1,955	1,520	365
Nebr.	55	44	50	55	2,750	2,420	944
Kans.	64	63	48	38	3,072	2,394	1,436
W. N. C.	896	815	48.4	68.9	43,368	56,152	20,540
Del.	3	3	35	30	105	90	34
Md.	31	31	25	27	775	837	410
Va.	154	151	20	29	3,080	4,379	1,839
W. Va.	116	121	18	21	2,088	2,541	813
N. C.	187	189	22	16	4,114	3,024	484
S. C.	66	59	13	11	858	649	123
Ga.	232	216	20	14	4,640	3,024	484
Fla.	199	189	41	56	8,159	10,584	7,515
S. A.	988	959	24.1	26.2	23,819	15,128	11,702
Ky.	193	164	10	16	1,930	2,624	656
Tenn.	185	179	16	17	2,960	3,043	761
Ala.	202	204	20	16	4,040	3,264	490
Miss.	82	82	18	17	1,476	1,394	321
Ark.	101	106	20	15	2,020	1,590	429
La.	96	101	20	20	1,920	2,020	828
Okla.	58	58	27	30	1,566	1,740	522
Tex.	283	311	21	45	5,943	13,995	6.018
S. C.	1,200	1,205	18,2	24.6	21,855	29,670	10,025
Mont.	64	62	122	55	7,808	3,410	2,251
Idaho	172	167	35	59	6,020	9,853	7,882
Wyo.	34	29	69	80	2,346	2,320	1,392
Colo.	74	73	90	64	6,660	4,672	3,551
N. Mex	20	20	45	40	900	800	472
Ariz.	63	65	53	54	3,339	3,510	2,352
Utah	52	49	49	51	2,548	2,499	1,999
Nev.	14	14	40	31	560	434	412
Wash.	77	73	28	50	2,156	3,650	2,555
Oreg.	64	56	32	46	2,048	2,576	2,318
Calif.	442	438	51	51	22,542	22,338	12,509
West	1,076	1,046	52.9	53.6	56,927	56,062	37,693
U. S.	5,724	5,591	36.0	41.1	206,305	229,751	115,342

*Revised †Preliminary

Just News

The Montana State Beekeepers' Association will meet at the Baxter Hotel in Bozeman, Montana, on December 2 and 3. Called to order at 10 a.m. on December 2; banquet that evening. A good program.—Mrs. O. R. Burnett, Sec.

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The Illinois State Beekeepers' Convention will be held on November 11 and 12 at St. Nicholas Hotel in Springfield, Illinois. A cordial invitation to all.

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60th Annual Convention of the California State Beekeepers' Association.—S. J. Watkins, President of the California State Beekeepers' Association, announces the 60th Annual Convention of the California Beekeepers which will be held December 6, 7, and 8 in Fresno, the geographical center of the Golden State. The convention headquarters will be Hotel Fresno. Make your reservations early and plan on a big meeting and a good time. The theme of the convention will center around two important fields: pollination problems, and the marketing of honey. The tentative program for the first day will include a report on the recent National Pollination Conference and discussions on research in legume seed production and practical grower pollination problems. A new feature will be instigated at this 60th annual convention when the first evening will be designated as University Night. The program will include discussions of apicultural research and beekeeping problems led by the staff of the University of California. The second day will be devoted to marketing problems, including discussions of the A.H.I., the American Beekeeping Federation, advertising, promotion, packing, merchandising, and honey co-operatives. The Annual Beekeepers' Banquet will be held on the second evening of the convention. Excellent food and entertainment is being planned. The last day of the convention will be taken up by reports of the Legislative Committee on price support and happenings in Washington. A very important business meeting will close the convention. This should be one of the most important meetings of the Association's past 60-year history. The Convention Committee welcomes all out-of-state beekeepers. All California beekeepers should make this meeting a must! Fresno or bust! December 6, 7, and 8! Don't be late! —M. C. West, Asst. Sec.

* * * * *

A. P. Homan of Shannon, Mississippi, passed away recently in his 67th year. He began his long connection with the bee business in 1918 with the late A. E. Shaw and continued with him until 1939 at which time he became connected with his sons, J.D. Homan and Farris Homan. This partnership was dissolved in 1941 when J. D. Homan entered the service. Mr. Homan then went with Homan Brothers, J. D. and Alfred, who bought out the interests of the Shaw estate, and he was with them until his death.

* * * * *

The Southern States Beekeepers' Federation will meet jointly with the **American Bee Breeders' Association** at the Whitley Hotel, Montgomery, Alabama, on November 17 and 18. On the Federation program will appear Dr. Warren Whitcomb of Southern States Field Station, Baton Rouge, Louisiana; Mrs. Harriett M. Grace of the American Honey Institute; Raymond Fischer of Little Rock, Arkansas; Walter T. Kelley, Paducah, Kentucky; Harold Clay, Washington, D. C.; F. E. Guyton, Auburn, Alabama; and M. J. Deyell of Medina, Ohio. The ABBA program appears below. Montgomery is centrally located—accessible to beekeepers over the country, and it is sincerely hoped that there may be a good attendance at this important meeting.

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Program of the **American Bee Breeders' Association Meeting** on November 18 at Whitley Hotel in Montgomery, Alabama, is tentatively as follows:

9:00 Invocation
9:10 President's Address—N. C. Jensen, Macon, Miss.
9:30 Minutes by Secretary—J. F. McVay, Jackson, Ala.
9:50 Breeding—G. H. Cale, Jr., Hamilton, Ill.
10:10 Price Support—E. C. Bessonet, Donaldsonville, La.

10:30 (Subject to be announced)—L.A.M. Barnette, Bellaire, Tex.
10:30 Report on ABBA Testing Projects —N. C. Jensen; L. H. Little, Vice-Pres., Nashville, Tenn.
11:30 Announcement of Committees Appointed.
11:40 New Developments in Improved Breeding Practices—Dr. J. I. Hambleton, Washington, D. C.
12:00 Adjourn for Lunch
1:30 Trademarks—J. G. Rossman, Moultrie, Ga.
1:50 What Shall We Do in Biloxi?—Wm. Wicht, Hattiesburg, Miss.
2:10 Report of Committees — (1) Rules and Regulations (2) Breeding (3) Resolutions (4) Nominations
2:30 Election of Officers

* * * * *

The Empire State Honey Producers' Association will hold its annual meeting Friday and Saturday, November 11 and 12, in the Syracuse Hotel, Syracuse, New York. We are holding our meeting a month earlier this year so that our members who are lucky enough to be able to go to Florida for the winter will be able to attend. The roads also should be in better condition for travel. Our program committee started early this year and has arranged a wonderful program. All beekeepers, their families, and friends are invited. Come prepared to have a good time.—E. T. Cary, Sec.-Treas.

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The Annual meeting of the **Iowa Beekeepers' Association** will be held at Ames on November 17 and 18, as the affiliated organization of the Iowa State Horticultural Society. The program this year will feature special topics, each half-day session. In the Thursday forenoon session the innovation in program making is being tried. Possible topics for presentation are listed. The speakers will be volunteers from the audience who feel they have something new to present on any of the topics. Presentation will be brief to permit plenty of discussion. In fact, the presentation of speakers will be short, so there will be ample time for discussion. President Earl Robertson has expressed the hope that it may be possible to move the hall sessions into the meeting room since all will have an opportunity to speak their piece, and if it is worthwhile, more should hear the information than are usually available in the hall sessions. The completed program will be available for distribution shortly after November 1. Anyone who is interested may apply for a copy of the program. — F. B. Paddock, Extension Apiarist, Ames, Iowa.

* * * * *

Joseph O. Moffett has just been appointed as an instructor in bee culture and entomology at Colorado A. & M. College at Fort Collins, Colorado. He was born at Peabody, Kansas, graduating from Peabody High School in 1943. In January of 1949 he graduated from Kansas State College receiving the degree of Bachelor of Science with honors. He recently completed his work towards a Master's degree in Entomology. He was in the armed forces of the United States for two years, serving one year in the European Theater of Operations. Mr. Moffett has worked as an assistant at the Fort Hays Branch of the Kansas Agricultural Experiment Station and also as a bee inspector for the Kansas Entomological Commission.—R. L. Parker, Manhattan Kansas.

* * * * *

The Forty First Annual Convention of the Indiana State Beekeepers' Association will be held on Saturday, November 12, in the Indiana State Fair War Memorial Building, 431 N. Meridian Street, Indianapolis, Indiana. All beekeepers and others interested in the beekeeping industry are cordially invited to attend and take part in the meeting. —W. R. Bielfield, Sec,-Treas.

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The South Dakota Beekeepers' Association is to meet for its annual session at 10 a.m., Saturday, November 5, at Pierre. — Frank A. Grace, Sec.-Treas.

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The Alberta Beekeepers' Association's Sixteenth Annual Convention will be held in the Masonic Temple at Edmonton, Alberta, on November 14 and 15, followed by the Annual Meeting of the Alberta Honey Producers' Co-Operative Limited on the 16th.

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Nebraska Honey Producers' Association's Annual Meeting will be held on November 15 at 207 Plant Industry Building, College of Agriculture, Lincoln, Nebraska.

9:00 Registration
9:30 Call to order—Pres. W. O. Harris, Cozad, Nebr.
Secretary-Treasurer Report— Edw. A. Wolfe, North Platte, Nebr.
State Inspector's Report—R. J.

Walstrom, Lincoln, Nebr.
Report from Legislative Committee
Report from State Fair Committee
"Organization and Cooperation"—Edward Nielsen, Cozad, Nebr.
Report from Marketing Committee
Appointment of Nominating Committee

11:45 Adjournment for lunch

1:15 Report from Public Relations Committee
"The New Look in Alfalfa"—Prof. Hugo Graumann, College of Agriculture, Lincoln, Nebr.
Report from Research Committee
"The National Federation"—Glenn O. Jones, Atlantic, Iowa.
"The Queen Rearing and Package Bee Industry"—Howard Scott, Chatom, Ala.
Report from the Pollination Committee
Business Meeting:
Appointment of 1950 committees
Finance Report
Election of Officers

Evening

6:00 Banquet—Campus Cafeteria
Entertainment
"Selling Out or Out Selling."—Gordon W. Crump, Cambridge, Wisc.

* * * * *

The Alberta Beekeepers' Association Convention will be held in Edmonton on November 14. R. M. Pugh, Manager of Saskatchewan Co-operative; F. R. Armstrong, Honey Specialist of the Dominion Department of Agriculture; W. H. Turnbull, Bee Inspector for British Columbia, will appear on the program.

* * * * *

The Westchester County Beekeepers' Association will hold its regular monthly meeting at 2:30 p. m. on Sunday, November 20, at the Odd Fellows Hall, 20 Lockwood Avenue, New Rochelle, N. Y. A guest speaker is expected to attend, and movies will be shown following his talk.—B. F. Miller, Publicity.

* * * * *

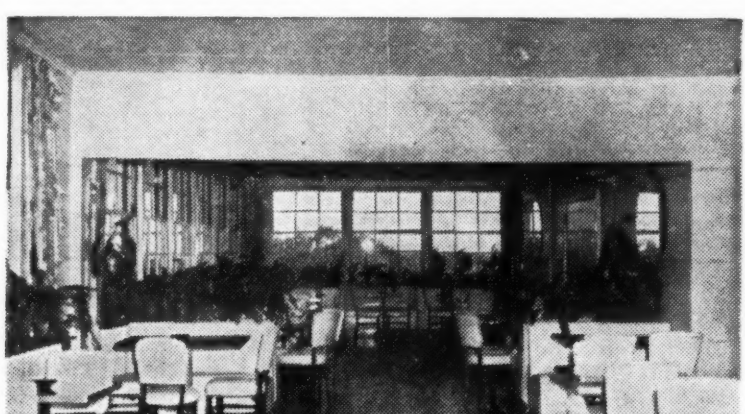
The forty-third annual convention of the **Manitoba Beekeepers' Association** will be held at the Marlborough Hotel in Winnipeg, Manitoba, on November 17 and 18. The annual meeting of the Canadian Beekeepers' Council will be held in the same hotel beginning November 21.—E. C.Martin, Sec.-Treas.

* * * * *

The next International Congress of Beekeepers will be held in England in 1951, according to a recent letter from R. H. Barnes of Weymouth, England, who reported on the recent Amsterdam meeting in the October Gleanings.

* * * * *

Eva Roullier Bohne, beloved wife of George W. Bohne, a prominent beekeeper of Luling, Louisiana, died October 9.



Sky Lounge atop the Buena Vista Hotel, Biloxi, Mississippi, where the Annual National meeting of the American Beekeeping Federation will be held on January 17-19. Emphasis will be placed upon three subjects: organization, marketing, and pollination. The program in detail will appear in the December Gleanings.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate:—15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

NEW CROP of honey shipped daily from producer in Florida. Pure orange blossom, 5 lbs., $2.25. Pure Florida comb honey, 5-lb. pail, $2.75. No C.O.D. orders, all shipments prepaid. E. R. Raley, Daytona Beach, Box 1610, Florida.

FLORIDA WHITE TUPELO, the world's finest honey—pure orange blossom honey — white clover, and buckwheat honey shipped in barrels, 60-pound tins, gallon cans, or in glass by the case. Pure maple syrup. Alexander Company, 819 Reynolds Road, Toledo, Ohio.

CLOVER extracted honey in sixties. Abram H. Brubaker, Lancaster, Pa., Rt. 1.

HARRIS for Michigan's best clover extracted honey, one can or a car. New cans. Harris & Son, St. Louis, Michigan.

500 NEW CASES fancy clover-basswood comb honey with that old-fashioned flavor. Sample case, $10.00. F.O.B. Barger Apiaries, Carey, Ohio.

CLOVER HONEY in new 60-lb. cans, 12c. Order from ad. Ohmert Bee Farms, Dubuque, Iowa.

NEW CROP Clover Honey, white, extra good flavor, 15c per lb. in 60's. Lose Brothers, 206 E. Jefferson St., Louisville, Ky.

WHITE CLOVER honey suitable for bottling. Angus Carruthers, Syracuse, N. Y., Rt. 2.

30 CASES COMB HONEY for sale, No. 1, weight, $7.50 per case of 24 sections; culls or No. 2, $5.00 per case, six case carrier. Some used bee equipment cheap. H. G. Quirin, 400 South West St., Bellevue, Ohio.

MICHIGAN FINEST CLOVER & AMBER HONEY in sixties. Arthur Thayer & Sons, 2122 Ames, Saginaw, Michigan.

FOR SALE—Northern Michigan honey —a blend of clover, basswood, milkweed —12c lb. in 60-lb. cans F.O.B. Northern Michigan Apiaries, Petoskey, Mich.

We furnish Beekeepers and Dealers with the finest Michigan clover, and light amber honey for table use. We have the stock Keep your customers supplied at all times. Get our mailing list. Address Townsend Sales Co., Northstar, Michigan.

PURE WISCONSIN No. 1 white honey in 60-lb. tins, about 20 tons. Fox Valley Apiaries, Clarence Pfluger, 127 S. Ontario St., DePere, Wis.

CARLOAD WHITE CLOVER HONEY, $10.45 cwt.; case of 50 5-lb. tin pails, $4.95; 60-lb. tins (Continental), ea., 45c; order of 100, 44c; order of 200, 43c; order of 500, 42c; carload, 41¾c. Alexander Co., 819 Reynolds Rd., Toledo, O.

200 60-lb. cans sweet clover honey, special, $5.00 each. Get them. Pershing Gulden, Enderlin, N. Dak.

FOR SALE — Mixed Iowa Clover, or Missouri Spanish Needle honey; also all our bees very cheap. Joe C. Weaver, R. 3, Springfield, Mo.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C.O.D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED — White and amber honey. Any amount. D. F. Treap, 316 Keenan Ave., Cuyahoga Falls, Ohio.

WANTED—Honey and wax, any quantity. Send samples and prices. Alexander Company, 819 Reynolds Road, Toledo 7, Ohio.

CASH FOR YOUR HONEY — Extracted or comb. Regular trade send sample. 60-lb. cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce St., Los Angeles 21, California.

WANTED—EXTRACTED HONEY— Clover or light amber. C. H. Denny, 483 Moody St., Akron, Ohio.

HONEY AND WAX WANTED — Mail Sample. Advise quantity. BRYANT & SAWYER, 2425 Hunter St., Los Angeles 21, California.

WANTED — White extracted or comb honey. Send sample. Millersport Honey Co., Millersport, Ohio.

CASH FOR BEESWAX — Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 N. High St., Columbus 2, Ohio.

WANTED—Comb honey and extracted honey, large or small amounts. Send price list and samples. R. A. Raley, Box 2263, Daytona Beach, Fla.

WANTED—Amber honey, old or new. Kimball Apiaries, Galesburg, Mich.

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

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HONEY CONTAINERS of all kinds, some new designs. Please let us furnish your requirements. The new BEE HIVE will have the prices, or write for them.

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121 No. Alabama Street
Indianapolis 4, Indiana

HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

HONEY WANTED—White and amber. Send sample, quantities, and prices wanted. F. E. Morrison, Rt. 3, Box 3696, Auburn, Calif.

WANTED HONEY — All grades, any amount, send samples and prices. Cans exchanged if desired. The Honeymoon Products Co., 39 E. Henry St., River Rouge, 18, Mich.

FOR SALE

QUEENBEE PAINTING OUTFIT, $1.00; colony records, 10-15c postpaid. Southwick Apiaries, Waban, Mass.

WE CARRY a full line of ROOT QUALITY Bee Supplies. Prairie View Honey Co., 12303 12th St., Detroit 6, Mich.

FOR SALE — Write for large free Bee Supply Catalog. We manufacture bee hives, foundation, tanks, and extractors. Listing many items not found in other catalogs. Walter T. Kelley Co., Paducah, Ky.

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

The only comb foundation plant in the East. We sell foundation, work your wax, render comb and cappings. Twenty nine years' experience. Robinson's Wax Works, R.D. 3, Auburn, N. Y.

YOUR WAX worked into medium brood foundation for 23c pound, 100 lbs., $19.00. Fred Peterson, Alden, Iowa.

FOR SALE—HONEY BUSINESS. Established in 1922, gross sales in 1948 $57,000, net profit $6,000 to $10,000 per year for the last ten years. With all modern up-to-date bottling machinery for filtered honey; capacity over two tons daily. Owner has made enough in business to retire. Best known label and a nice established wholesale business in state. Price for good will and business, $8,000 cash, merchandise extra. Building owned by owner and could be bought or leased or machinery moved. Just the thing for a large producer. Information on request. Box 39, Gleanings, Medina, Ohio.

DECAL LETTERS and numerals. Gold trimmed with black. Attractive durable signs of trucks. show windows. Sizes, 2-inch, 5c each; 3-inch, 10c each; 5-inch, 15c each, postpaid. Tontz Honey Farm, Elsinore, Calif.

FOR SALE—Better than $1000 worth of bee equipment and $100 worth of honey pails, all for $260. C. L. Smith, Rockwell, Iowa.

FOR SALE — Attractive duplex home, and honey house with Lake Frontage in Clermont, Florida, citrus country. With or without bees. Wilburt Wahl, Clayton, N. Y.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements, but we cannot be held responsible in case disease occurs among bees sold or if diasatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CAUCASIAN—2-lb. pkgs., $3.00; 3-lb., $3.75. Queens, 75c. Lewis and Tillery Bee Co., Rt. 1, Box 280, Greenville, Ala.

IN FLORIDA — 600 1½-story colonies, $10.00 each; Cypress hives. Combs in good condition, all young queens. With six frames of brood or more, and ready for production. No disease or junk, extra equipment below cost. Box 1610, Gleanings, Medina, Ohio.

QUALITY CAUCASIAN BEES — Book your orders with us now and get them when wanted in 1950. Bolling Bee Co., Bolling, Ala.

BREWER'S line-bred Caucasian Queens, 1-99, $1.00; 100 and up, 75c. Member ABBA. Brewer Brothers Apiaries, 3616 Caucasian Circle, Tampa 9, Florida.

GOLDEN Italian Package Bees and Queens. Two pounds, $4.00; three pounds, $5.00; Queens, $1.00 each. Guilford Apiaries, 4300 A. Burlington Rd., Greensboro, N. C.

ITALIAN QUEENS, 50c each, shipped Air Mail and every queen guaranteed. Walter D. Leverette, P. O. Box 364, Ft. Pierce, Florida.

THREE BANDED Italian Package Bees and Queens. Two pounds, $4.00; three pounds, $5.00. Queens, $1.00 each. Bessemer Apiaries, 4300 A. Raleigh Road, Greensboro, No. Car.

PACKAGE BEES headed by Mountain Gray Caucasians or Leather Italian Queens. Write for prices. March 20 delivery. TWIN BEE CO-OP, 3616 Caucasian Circle, Tampa 9, Florida.

BEES and QUEENS. Send for FREE circulars. Over 30 years a shipper. Blue Bonnet Apiaries, Weslaco, Texas.

1 to 40 colonies with crop. Disease free. Phone 400 or 54. Paul La Plant, Anoka, Minnesota.

REASONABLE, 1000 lb. package bees with queens, 2-lb., 1-20, $3.60; 21-up, $2.75; 3-lb., 1-20, $3.75; 21-up, $3.50. April 1st delivery. Write Lloyd Apiaries, Rt. 2, Box 89, Mobile, Ala.

PACKAGE BEE AND QUEEN BUSINESS for sale. Located in South Georgia. 400 colonies, 500 queen nucs. Requeened and state inspected. No disease. Health certificate. This is not a sacrifice outfit but an established package business. Cash. Write R. B. Herier, 1574 Fulton Ave., Springfield, Ohio.

FOR SALE—21 colonies with land and extracting house, chickens, $1000. W. B. Kirby, 3911 Joliet Ave., Lyons, Ill.

FOR SALE—27 swarms, 10-frame hives, 55 supers, 20 lb. sec.-foundation, 1500 sections. Chas. Smith, 443 Kentucky Ave., Tipton, Ind.

500 or more colonies fully equipped. One dollar each, balance less than rent. Good equipment. Good producing locations. L. D. Taylor, Harlan, Iowa.

THREE BANDED ITALIAN bees and queens for 1950. Write for circular. Alamance Bee Co., Graham, N. C.

MISCELLANEOUS WANTED

WANTED: Pratt's booklets "Simplified Queen Rearing" and "Forcing the Breeding Queen to Lay in Cell Cups", also the 5th booklet. M. I. Taylor, Richmond 22, Va.

Get Ready Now

Booking orders for packages and queens for 1950 without deposit, or obligation. Write us today giving dates and number and size of packages.

Bessonet Bee Company
Donaldsonville, La.

Italians

Bees and Queens for 1950
We plan to offer the best Bees and Queens at the lowest possible price. Write for details.

A. M. Peach
Baldwyn, Mississippi

A Good Rule to Go By

Buy your Bees and Queens from

Alabama Apiaries
Uriah, Alabama

High Quality Italian Queens and Package Bees
For 1950
Carlus T. Harper
New Brockton, Ala.

* * * * *

WAX SALVAGE PLANT IN CALIFORNIA

(Continued from page 681)

tion of such plants, no matter how well the plant might be constructed. The commissioner must not only take into consideration the construction of the plant, but also the ability of the person applying for a license to operate such a plant, before he issues the license. His protection is the right to revoke the license at any time after a hearing.

The disease situation in California is such that the operators of these plants will never get rich from it, but they no doubt do make a small amount out of it in their spare time. Their operations, however, are a boon to the beekeeper and to the inspector as well.

XUM

ASKED AND ANSWERED

(Continued from page 699)

two coats of good outside white paint Now that I have all these cases finished and hauled eight miles out of the city to where I have my bees, I am told that all I will have left in the spring will be six dead colonies—all soaking wet—or they will all be weak from dysentery. There has been no light honev— only amber and dark— and it is this dark honey that the bees have for winter. When packed as I am about to do they do not get out often enough for cleansing. I have been told that I am not packing them but putting them in an ice box. Also that the sun does not get a chance to get through all that case. Up here they use only building paper—no chaff.—P. J. Schultz, N. Y.

Answer: Regarding the packing cases you have already made and propose to use, we see no objection to using them provided you make an upper entrance of about 1 inch or ¾ inch in diameter which would extend through the packing to the outside of the case. This upper opening would help the colonies to expel excess moisture within the hives during the winter and would also give the bees a chance to fly out the upper entrance if they needed a winter flight instead of having to go down through the bottom of the hive to the lower entrance where the temperature is rather cold. Of course, the lower entrance should be left open. We note that your lower entrance is ⅞ inch deep by 3 inches wide. In our opinion, ⅜ inch deep would be better as it would then exclude mice. However, if you put ¼-inch wire mesh screen over the entrance to exclude mice, all well and good. It is important to have the right sort of insulating material to go between the packing cases and the hives. Under no circumstances should you use sawdust or fine planer shavings. Coarse chaff or straw is preferable. The packing should not be tamped in too tightly. Leave plenty of air spaces in the packing. This is what makes good insulation. You could winter your colonies if wrapped in a single thickness of black building paper. The black paper is considered preferable for winter because it absorbs the heat from the sun. White is a good color for summer.

Canada's
National Monthly Magazine
for Beekeepers
Canadian Bee Journal
54 Bloor St. W., Toronto 5, Ont.
U. S. Subscription Price,
only $1.75 per year.

HELP WANTED

WANTED: Experienced queen man with ability to take charge of expanding apiary. Give details in first letter. Triangle Apiaries, North, S. C.

WANTED—Two beekeepers. One experienced. One with some knowledge of beekeeping. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

SUPPLIES

ATTENTION BEEKEEPERS IN MINNESOTA and adjacent states. We offer a real service on Lewis-Dadant Supplies, honey containers, and labels at a price saving to you. Top market price paid for extracted honey and beeswax. HONEY SALES COMPANY, 1806-08 NO. WASHINGTON AVE., MINNEAPOLIS, MINNESOTA.

SEEDS

Study your conditions, plan for better BEE PASTURE. Free circular "SEEDS OF HONEY PLANTS". Pellett Gardens, Atlantic, Iowa.

PERMANENT PERENNIALS, TREES, SHRUBS for your bee pasture can now be planted this fall. Illustrated Folder free. NICOLLET COUNTY NURSERY, St. Peter, Minn.

MAGAZINES

THE BEE WORLD—The leading journal of Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free. 12 cents stamps. Membership in the Club including subscription to the paper, 10/6. The Apis Club, L. Illingsworth, The Way's End, Foxton, Royston, Herts, England.

WESTERN CANADA BEEKEEPER—Official organ of the Manitoba Beekeepers' Association. One year, $1.50; two years, $2.25. three years, $3.00. In combination with Gleanings in Bee Culture, $2.75. 211 Affleck Bldg., Winnipeg, Canada.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

KNOW interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarh, Dist Naini Tal, U P., India, or obtainable from them. Subs. Rs7/—or 10 shillings or 2.25 dollars per annum. Single copy Rs¼ s. 1/9 or 40 cents (International Money Order.) Payment in mint postage stamps of your country accepted.

ANGORA GOATS

DO YOU FIND it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any other magazine published. Subscription — $1.00. Hotel Cactus, San Angelo, Texas.

CAUCASIANS—PRO AND CON

(Continued from page 684)

net returns are concerned to keep the moving of bees to a minimum. Likewise we might do well to stay by our Caucasians. We know their habits and their strength, and through the years they have done well by us as far as surplus honey is concerned.

Every man who works with bees for many years becomes somewhat of a philosopher. He does not expect perfection in his bees — they are too much like human beings for that. But there's a time and a place for everything and further philosophizing must wait, for our noontime rest is at an end and we must get back to work. Who knows? Perhaps that first super of **new** honey, all capped over, is waiting for us this afternoon! And by the way, you'd better put your shirt back on, Son, for there are yellow bees in this yard. Honey flow or no honey flow, it is wise to treat Italian bees with respect.

A TALK TO BEEKEEPERS

(Continued from page 701)

connected with securing surplus honey. Do bees prefer going up through a small opening rather than a large one, and will the honey ripen faster in the super above an inner cover with the block removed, than in a super put on the regular way? Perhaps someone can enlighten me on this matter, or possibly some of you readers have made similar observations.

The Two-Queen Hives

On page 572 of the September 1948 Gleanings we showed a picture of a two-queen hive we made up as an experiment. It has a brood chamber at each end containing either nine or ten combs. These brood chambers are separated from the center part of the hive by perpendicular queen excluders. The main entrance to the hive is in the middle compartment. The brood chambers at each end are simply what the term denotes—compartments or chambers for the rearing of brood.

The interesting thing about this hive is that the bees produced by each queen intermingle and store surplus honey in and over the middle compartment. At the present time this two-queen hive has approximately three supers of honey. The other day—October 10—when I checked through each brood chamber, I found both queens laying. One had brood in four combs and the other had brood in three combs. In one brood chamber the combs of brood were near to the perpendicular queen excluder, while in the brood chamber at the opposite end of the hive the combs of brood were in the middle of the chamber.

Last year when we experimented with this same hive, we found it difficult to keep a queen in each end of the hive. We lost two queens during the season. We have had better luck this year.

Now, I am not recommending such a hive. I am just trying to find out if two queens can be kept in this type of hive and how much more surplus honey, if any, such a colony will store, than a colony in a single-queen hive.

QUEENS
York's Quality Bred
Italian Queens
1-24 25-99 100-up
$1.00 ea. 85c ea. 75c ea.
None better regardless of price
York Bee Company
Jesup, Georgia
(The Universal Apiaries)

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LITTLE'S APIARIES
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Guaranteed live delivery — Satisfaction. March orders a specialty.

Prices for Spring 1950:

	2-lb.	3-lb.	4-lb.	Queens
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10-25	3.50	4.50	5.50	0.95
25-up	3.25	4.25	5.25	0.90

Sunkist Bee Company Convent, La.

Getting Ready for 1950

Quality and Price is Right at

The Stover Apiaries

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For Sale

Italian package bees and queens
Health certificate and live delivery guaranteed.

LYNN WILLIAMS

Rt. 3 Oroville, Calif.

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The Beekeepers Magazine

Lansing 15-B, Mich.

(Serving honey producers since 1938)

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233), of GLEANINGS IN BEE CULTURE, published monthly at Medina, Ohio for October 1, 1949.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher: The A. I. Root Co. Medina, Ohio.

Editors: E. R. Root and M. J. Deyell, Medina, Ohio.

Business Manager: Alan I. Root, Medina, Ohio.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

The A. I. Root Company, Medina, Ohio; Donald L. Demuth, New York City; J. T. Calvert, Medina, Ohio; H. H. Root, Trustee A. I. Root Estate, Medina, Ohio; E. R. Root, Medina, Ohio; Alan I. Root, Medina, Ohio; H. H. Root, Medina, Ohio; Ethel A. Calvert, Alhambra, California; Mrs. Scott Goldthwaite, Chicago, Illinois; John Weber, Medina, Ohio; Amherst T. Spitzer, Medina, Ohio.

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None.

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months precedng the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

ALAN I. ROOT, Business Manager

Sworn to and subscribed before me this 30th day of September, 1949.

DORIS E. WALTZ, Notary Public

(My commission expires May 9, 1950)

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Do They Include the Use of DR Stock?

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Better Bred Queens Three Banded Italians

Thanks to our many customers for this season's business. Write us your requirements for 1950. We are ready to serve you.

Calvert Apiaries Calvert, Alabama

Package Bees Italian Queens For 1950

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